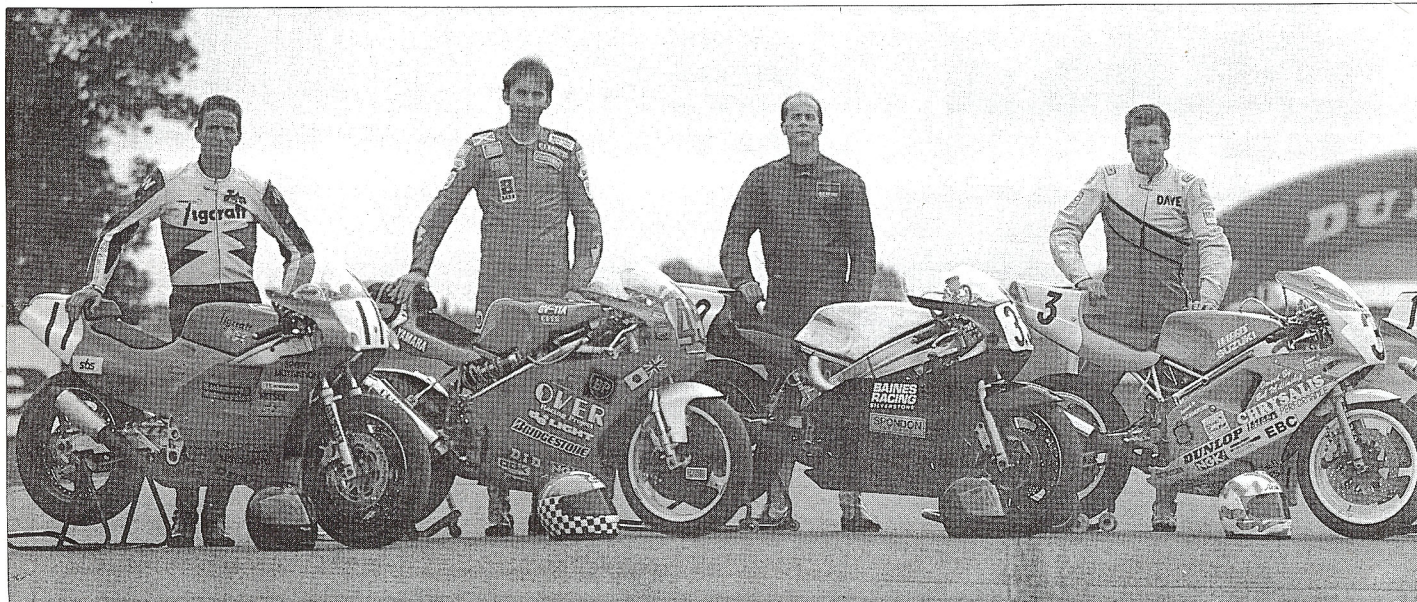


# TRACK TEST

# ▷ THE SOUND OF



## History of the one-pot wonders

Singles racing took off in Japan three years ago — but is now big news around the world. It attracts stars like World Superbike rider Fabrizio Pirovano in Italy and there is even talk of a European singles championship next year. Singles racing in Britain got a huge boost this year when Japanese enthusiast Kensei Sato moved his entire operation to England because the standard of our SoS riders was so high. A class that started off as cheap 'n' cheerful suddenly turned into something very serious — and the standard of machines has risen dramatically. All the top bikes use racing chassiss, any four-stroke single-cylinder engine and silks. While the singles' straight-line speeds cannot match those of the sophisticated multi, they make up for it in the corners — and put in some very impressive lap times. Competition is close and championships hard fought — last year's went right down to the final chequered flag, when John Laker beat ex-125 grand prix star Robin Milton by one point. OLLY DUKE rode this season's machines and met their riders at Donington Park.

### SPONDON-ROTAX

Paul Harrison's Spendon-framed single looks ancient — but the Rotax-engine bike is as fast as anything else, thanks to the efforts of ace tuner Steve Campbell.

This is Harrison's third season on the Spendon, which proves you don't have to throw huge wads of cash at your bike to make it competitive.

The machine finished fourth in last year's SoS championship and now lies equal second with Laker's Tigcraft.

Harrison also won the Pembrey SoS round and regularly wins at club level. He is currently trying out a new cam with shorter duration and higher lift, to give better drive out of corners.

Everything that can be done to reduce reciprocating mass has been done — down to shaving metal off the rocker arms.

"I have breathed on the head and the intake manifolds," said Campbell, who currently races in the Harley Davidson 883 series.

"And I have sleeved the cylinder down from 530cc to 615cc, as the old, big bore kit kept blowing."

Spondon Engineering will make a basic rolling chassis — including frame, swinging arm, Ohlins shock, footrests, rear-wheel spindle and steering head bearings — for around £1,700. A sophisticated rolling chassis can cost up to £5,000.

#### SPECIFICATIONS

**Engine:** Air-cooled, single cylinder, four-stroke Rotax with single carburettor and four-valve head. Capacity 610cc. Bore x stroke 97mm x 62mm. Compression 12:1. Carburettor Mikuni 44mm flat slide. Maximum power estimated 60bhp at 8000rpm.

**Transmission:** Rotax close-ratio six-speed gearbox. Final drive by chain.

**Chassis:** Spendon alloy double beam frame. Suspension: Suzuki GSX-R750J telescopic forks. Ohlins shock absorber with rising rate linkage and alloy swinging arm. Wheels: Astralite 3.5in-17 front, 4.5in-17 rear. Dunlop

# Single



### Leader of the pack: The gorgeous Over-Yamaha

tyres. Brakes: 280mm twin front discs with Nissan four-piston calipers, rear 210mm single disc with twin piston caliper. Wheelbase 134.6cm (53in). Weight with gallon petrol 108.8kg (240lbs). Rake 24 degrees.

**Agent:** Spendon Engineering Ltd, 78 Nottingham Road, Spendon, Derby DE2 7NL. Tel: 0532-662157.

**Tuner:** Steve Campbell, 16 Valley Drive, Braunstone Town, Leics LE3 3ED. Tel: 0533-890637.

Derek Chittenden, Hejira's design engineer, commissioned Formula One car builders March to take computer readings off the steel-frame Hejira.

With those figures, Chittenden designed the '92 frame which he says makes the complete machine 40lbs lighter than the steel-framed bike.

Rider Martin Bartlett, from Bicester, Oxon, is testing the carbon-based bike this season, to find out how durable the chassis is.

"I love the Hejira," said Bartlett (32), who started racing in '81. "It stays exactly where you put it and

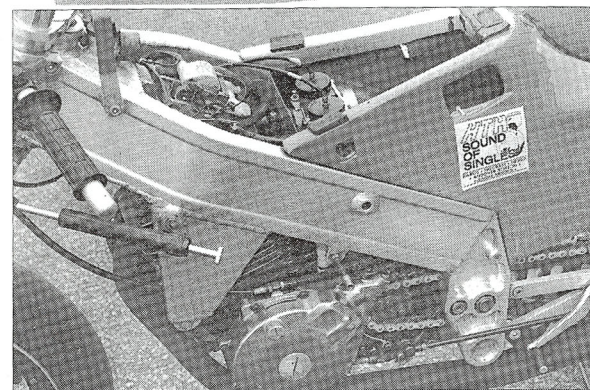
never gets lively."

"We'd like to build more, to sell," said Chittenden. "The massive headstock has a honeycombe internal, covered by carbon fibre. The structure is probably well over-engineered."

Powered by a standard Rotax 600 engine, the bike certainly felt no quicker than any of the others singles.

Throttle action was a little heavy and brakes were strong, but not sharp. The steering is not quick, but very precise and smooth.

There is plenty of room, even for tall riders, while the engine was not as smooth



Mean and lean: John Laker's Yamaha-engined Tigcraft

# BIKE SHEDS

CHOICE OF COLOUR



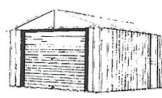
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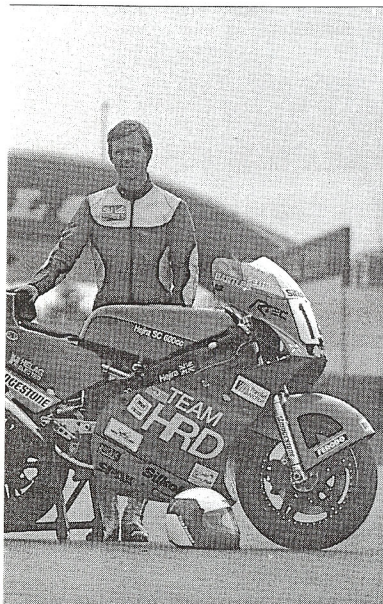
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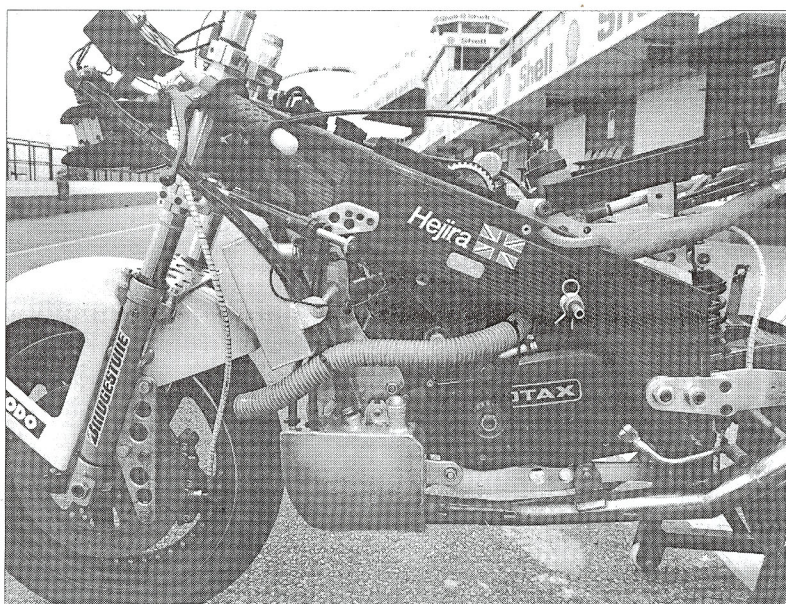
# SINGLES

# TRACK TEST



**Top grid irons:**  
The five best  
Sound of Singles  
racers line up  
for the MCN  
track test at  
Donington. Left  
to right:  
Spondon-Rotax  
Hejira-Rotax  
Over-Yamaha  
Harris-Suzuki  
Tigcraft Yamaha

**Fast torquer:**  
The Hejira-Rotax  
has been a  
consistent top  
runner



# - minded racers

as some Rotax motors. The other singles builders may joke about Derek Chittenden and his plastic welding equipment, but he has embarked on a unique and fascinating project.

**SPECIFICATIONS**  
Engine: Rotax, twin-cam, air-cooled single cylinder with liquid-cooled head. Capacity 600cc. Bore x stroke 97mm x 81mm. Compression ratio 11:1. Carburettors: twin 36mm Dellortos. Maximum power 64bhp (estimated) at 8000rpm. Six-speed Aprilia 250 grand prix gearbox.

**Chassis:** Box section carbon fibre beam frame with steel subframe and carbon fibre swinging arm. Suspension: modified 38mm Marzocchi forks with adjustable fork yokes. Spax shock absorber with rising rate linkage. Wheels: Astralite 3.5-17 front, 5.25-17 rear. Bridgestone tyres. Brakes: front twin 300mm discs with four-piston billet calipers, rear single 195mm disc with Lockheed twin-piston caliper. Dimensions: Dry weight 120kg (264.6lbs). Race 24 degrees. Wheelbase adjustable from 52.5in to 54.5in.

**Builder:** Hejira Racing HRD Ltd, Manor farm, Gawcott, Buckingham, Bucks MK118 4JF. Tel: 0280-812152.

## OVER-YAMAHA

Over Racing Project boss Kensei Sato brought his whole operation — including top-notch rider Shinichiro Ohura — to Britain at the beginning of the season.

"We have no opposition in Japan," explained Sato, who was Japan's 125 champion in '76.

"Ohura was Japan's top Formula One privateer and singles champion last year. He also won the big Sound

of Singles race at Assen, in Holland, in '91.

"There are also good business opportunities in Europe for specialist frame makers. If I can achieve success in Britain and Europe, it will open up markets in the rest of the world."

When we rode the Over single at Donington it was in a class of its own. But with a £13,400 price tag that was hardly surprising.

Phenomenal front brakes include carbon right disc and cast iron left disc for daredevil braking. Two fingers are enough to lock up the front wheel, thanks to the sharp and responsive system.

The oval section space frame, with TZ forks and Ohlins shock, gives super-sensitive handling, and the adjustable rake helps make this the quickest steering of any of the singles.

When I first flicked the 118kg machine through Donington's Esses, the steering was so fast it took me completely by surprise. You just do not need to put in any effort.

But the riding position is very cramped — you almost sit with your nose pushed against the tacho, but relax into it and you hardly notice

the bike beneath you.

Scott Roger Bennett, who won the '91 Battle of the Twins championship and now rides an Over single, stands 6ft 2ins and weighs 13 stone, yet the 650cc Yamaha SRX engine still carries him to top placings.

"There is nothing in it between my own, John Laker's and David Morris' bikes, which says a lot for the Over single," said Bennett, who laps Mallory Park in a fraction over 52 seconds (as quick as many of the Superbikes).

"Singles racing is fantastic after riding in Superbike, which I'm also doing this year," added Bennett.

"The bike handles excellently, brakes are superb, steering is quick and light and it suits my style of fast cornering."

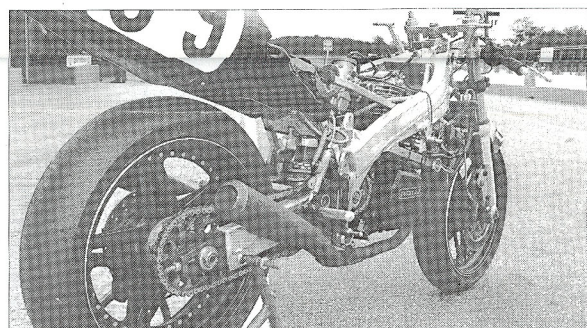
The SRX engine is available in various stages of tune and agent Graham Boothby will supply complete bikes, ready to race.

**SPECIFICATIONS**  
Engine: Yamaha SRX600 air-cooled single cylinder, bored to 660cc. Bore x stroke 100mm x 84mm. Arias piston. Four-valve head. Carburettors: Twin 36mm Mikuni. Compression 11.5:1. Maximum power 71.5bhp at 8000rpm. Electronic ignition.

**Transmission:** Five-speed R.S. Supo gearbox.

**Chassis:** Oval section alloy space frame. Suspension: 191mm TZ250 forks, rear Ohlins shock with adjustable ride height. Wheels: three-spoke alloy, 3.75-17 front, 5.25-17 rear. Bridgestone tyres. Brakes: front right 300mm

**Black devil:**  
Rotax power and  
Spondon frame  
technology have  
made Paul  
Harrison's  
machine one of  
the fastest  
singles on the  
track



carbon disc, front left 300mm cast iron disc with AP Lockheed four-piston calipers. 210mm rear disc with two-piston caliper. Rake: 23 degrees. Weight: 118kg (260.1lbs).

**Agent:** Single Minded, Smithy Cottage, Liverpool Road, Bickerstaff, Lancs L39 0EF. Tel: 0695-423621.

## HARRIS-SUZUKI

Dave Morris is a brave man. Against all the odds he placed a heavy Suzuki DR750 single-cylinder motor in his Harris frame. But the gamble is paying off and he now leads the Sound of Singles championship.

Few tuning parts are available for the engine, but

he was encouraged by the failure of the twin cam Rotax engines.

His aim now is to reduce the sheer weight of the trail bike lump — the crank cases alone are massive — and he hopes that by junking the big flywheel magnet he will get nearer to his goal.

The season has been spent trying to make his machine handle. Morris has been fighting front end chatter and even fitted the forks from his Yamaha FZR400 for the Pembrey SoS round.

But the chatter persisted and in desperation he looked at the rear of the machine. He again cannibalised the FZR, using its rear wheel — and immediately took a second off his Pembrey lap time.

"I had an oversize rear tyre on the Harris, which caused the chattering," said Morris, who has been racing for 15 years and does all his own tuning.

Lester Harris, whose firm Harris Performance built the frame, added: "Up till now we have dealt with Rotax engines, which are smaller and lighter. We had to fiddle with the engine position in the frame. It has been difficult."

Morris' Suzuki-engined Harris vibrated round Donington and the standard DR gearbox was notchy. Steering was positive but not sharp. Despite its extra engine weight, Morris' bike is

certainly on the pace of the other top singles.

**SPECIFICATIONS**  
Engine: Suzuki DR750 air-cooled single cylinder with Kent Cam single camshaft. Capacity 727cc. Bore x stroke 105mm x 84mm. Carburettors: Twin 40mm Mikuni flat slides. Four-valve head. Arias piston. Maximum power about 69bhp at 8000rpm. Harris-made exhaust system. Engine standard apart from camshaft and piston.

**Transmission:** Standard ratio DR750 five-speed gearbox. Final drive by chain.

**Chassis:** Harris alloy twin beam frame with engine as stressed member. Tubular steel sub-frame. Yamaha FZR400 telescopic forks. Ohlins shock absorber with rising rate linkage and alloy swinging arm. Wheels: Suzuki RS500 three-spoke alloy, 3.7in-17 front, 5.0in-17 rear. Tyres: Dunlops. Brakes: 310mm twin front discs with Honda RC30 four-piston calipers using EBC pads.

**Agent:** Harris Performance Products, 6 Marshgate Road, Hertford, Herts SG13 7AQ. Tel: 0992-551006.

**Tuner and rider:** Dave Morris, Chrysalis Racing, 143 Swanwick Lane, Swanwick, SO3 7DS. Tel: 0489-583213.

## TIGCRAFT-YAMAHA

Tigcraft rider John Laker stole the SoS championship from Harris rider Robin Milton by one point last year. And until the Pembrey round this year, he was in the lead again.

A slip-off in the damp conditions put him back to equal second. Way ahead of anyone else in the race, Laker just did not back off when the drizzle started.

The 24-year-old from West Sussex is racing on a limited budget, yet his machine remains competitive with the Over Racing single.

"At Thruxton I was coming into the chicane three abreast with Roger Bennett and Ohura on the Over Racing singles, and that's a

fast circuit," said Laker, whose basic bike cost about £6000.

I enjoy the singles — you can be competitive without spending a fortune," added John. "And it's a good way to get into international racing."

"If there is a European round next year, my aim will be to win it."

The Tigcraft is slim, with plenty of room to tuck into. Steering is neutral and the machine corners very smoothly.

And the bike's speed comes from using Yoshimura racing bits that have been added to the SRX motor. John and his father have carried out all the tuning modifications.

The Lakers will soon be running a water-cooled, fuel-injected SRX engine with a five-valve head. The present bike is now up for sale.

**SPECIFICATIONS**  
Engine: Yamaha SRX600 engine, bored to 680cc, with Yoshimura tuning parts. Bore x stroke 101.5mm x 84. Compression ratio 10.4:1. Carburettors: Twin 34mm Amal MK2s. Four valve head.

**Transmission:** Primary drive using standard five speed gearbox, final drive by chain.

**Chassis:** Tigcraft alloy twin spar. Suspension: Kawasaki KR-1S telescopic forks. Kayaba shock absorber with rising rate linkage and KR-1S swinging arm. Wheels: Astralite 3.5in-17 front, 5.0in-17 rear. Tyres: Dunlops. Brakes: 300mm twin front discs with Tokico four-piston calipers, 210mm rear disc with twin-piston caliper. Rake 26 degrees. Trail 9.5cm (3.7in). Weight: 121kg (266.6lbs). Wheelbase 145.5cm (57.3in). No subframe and seat made of kevlar.

**Agent:** Tigcraft, Unit 3, Ascot House, Rectory Road, Farnborough, Hants GU14 7BT. Tel: 0205-517962.

**Rider and tuner:** John Laker, 2 Railway Cottages, Tripp Hill, Fittleworth, Pulborough, West Sussex. Tel: 0798-82552.



Good vibrations: Dave Morris's Harris-Suzuki has been well sorted