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Sid Carlson (No. 73) riding Alastair McQuaid's XR slugs it out with Roger Reiman (on a production iron XR) at Jerseyville, Illinois in May 1970



# CHILDREN OF THE REVOLUTION

When the rules of flat track racing changed in 1969 the big manufacturers had to make new bikes. And fast...

Words: Gary Inman. Photography: Rory Game



t's 1969 and the historic American sport of flat track racing is going through a revolution that will change it forever. The rules have been altered to allow riders to fit a rear brake to their machines but more momentously, the decision has been made to allow overhead valve engines, previously limited to 500cc, a maximum displacement of 750cc. For some the golden age

is over, but for many (and thanks, in part, to Bruce Brown's film *On Any Sunday*) the next few years would be regarded as the high point of the Grand National Championship. Alastair McQuaid wouldn't argue with that.

Over the last 18 years the civil servant from South Wales has bought and restored three beautiful examples of dirt track

weaponry. These bikes are from that unsettled period when American, British and Japanese manufacturers were all forced to innovate, in order to stay in the game. Their success is easily established in the harsh light of hindsight but at the time, for all of them, there was everything to fight for.

Like so many dirt track fans from outside the US, Alastair was first hooked by the look of these bikes. They're almost a caricature of a motorcycle, just the absolute essentials distilled into one muscular package. The only augmentation is the three big number boards each bike carried to give the lap scorer a fighting chance once the Carlisle dirt track tyres were spitting up rooster tails of Illinois pea gravel.

Some might think a British bloke collecting dirt track bikes is strange, but it's no stranger than collecting any other kind of race bike. The opportunities for the bikes to stretch their legs is limited, but Alastair isn't afraid to ride them (at classic sprints), or let them be ridden.

We photographed them at Rye House Speedway circuit, north of London in Hertfordshire.

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Is there a better looking race bike? Primary cover is ribbed for extra strength



# HARLEY-DAVIDSON XR750 PROTOTYPE

Harley-Davidson's overhead-valve 750cc race bike is legendary. Since 1972, when the XR750 came into its own, Harley has only been beaten to the Grand National Championship in 1973 and 1974 by Kenny Roberts and Yamaha, and 1984, 1985, '86 and '87 and again in '93 by Hondas ridden by Bubba Shobert and Ricky Graham. Even now it's headline news if an XR is beaten in the final of a professional race on the mile or half-mile tracks.

Ironically, Harley were slow to react to the AMA rule change allowing overhead valve engines a displacement of 750cc. Until 1969 their side-valve 750s had raced against 500cc overhead valve machines. That meant Triumph twins and BSA singles and twins.

Harley started planning an overhead valve racer but couldn't build enough bikes to satisfy homologation until the 1970 season (though Mert Lawill won them the '69 championship on a side-valve anyway). In the meantime, during 1969, Bill Werner, a 25 year-old engineer working under the legendary Dick O'Brien in the H-D race department, started building this bike as a personal project outside work hours.

The motor is very similar to the factory's iron XR. Werner built it using scrounged parts. The modified cases, iron barrels and iron heads came from the company's XLR and XL Sportster road bikes – dirt track was still very much a production-based sport.

In truth the factory XR didn't achieve significant success until the 1972 redesign, when radically re-designed alloy cylinder heads and barrels were fitted. And Bill Werner went on to be the tuner/mechanic for Gary Scott, Jay Springsteen and Scott Parker as they racked up thirteen GNC titles on the 'alloy' XR750.

When Alastair bought this bike, in 1992, it was a road legal XR750, and it had moved from Milwaukee to London. "I wasn't actually looking to buy a bike when I saw this one advertised, but I rang the owner anyway, just to see if I could come and have a look at it," Alastair explains. "I knew a little about dirt track racing, but I hadn't even watched *On Any Sunday*. But when the owner started it up I just bonded with the bike and had to buy it."

In those pre-internet days Alastair started writing letters to gather more information about what he had bought. The engine number was the crucial clue – it led to a reply from American dirt

track aficionado (and author of several books on Harleys) Allan Girdler saying, "You don't know what you've got, do you?"

With Girdler's help Alastair discovered more of the bike's history. It turned out that it had been raced by Sid Carlson, a leading dirt track racer. And it placed well in National races and many of the rough-and-rabid prize-money-paying events held at county fairgrounds.

How it came to end up as a British registered road bike with a different frame is a long story, but Alastair discovered that the timing of his purchase was perfect.

"When I was restoring the bike it was before vintage flat track really took off," he explains. "People were incredibly generous because there wasn't a lot they could do with the parts they had. I swapped my frame for the original (that Bill Werner had chalked out on his workshop floor and fabricated himself from chro-moly steel) with George Wills. He was a vintage racer who had bought loads of parts out of Werner's basement."

"When I was building the bike I visited America and met Allan Girdler and Bill Werner, found out about the bike's history and realised I had to do a very good and sympathetic restoration." And he has managed to do exactly that.

And Alastair had one final stroke of luck, "I'd only seen black and white photos of the bike and assumed it was orange. It was only when I was sent a colour photo that I realised it was yellow."

## SPECS

**Engine/transmission**  
**Engine** Harley-Davidson 'Iron' XR750 prototype, air-cooled, 4-valve, 45-degree V-twin **Capacity** 750cc **Bore x stroke** 76 x 82mm **Carb** 38mm Mikuni **Clutch** Barnett dry-clutch with alloy basket **Gearbox** Close-ratio 4-speed **Ignition** Fairbanks-Morse dual-fire magneto

**Chassis**  
**Frame** Werner chro-moly duplex with cast H-D motor mounts. Werner rectangular section swingarm **Suspension** (front) Ceriani 35mm forks **Suspension** (rear) Koni Special D twin shocks **Weight** 312lb **Wheelbase** 54in (1372mm) **Fuel capacity** 7 litres (approx)



Hey, come back with the drill. There's room for more holes



Twin plug heads – but only one is wired for sparks



Remote oil filter hides iron barrels and cylinder heads



Single carb was used on Sportster derived engine

# TRACKMASTER YAMAHA XS750

Trackmaster is one of the most famous names in dirt track. The Californian chassis manufacturer was founded by Ray Hensley (who previously had made frames as SonicWeld). At one time the firm was owned by the multi-talented flat track photographer Walt Mahony. What isn't in doubt is that Trackmaster made some of the sweetest-handling chassis of the late-1960s and early 1970s.

Trackmaster BSAs, Triumphs, Nortons and Yamahas have been ridden to race wins by the greats of the era. They built their reputation building nickel-plated, 4130 chro-mo frames that won, time and again, at the Southern Californian bear pit of Ascot Park in Gardena, Los Angeles.

There are a few different disciplines that can be covered by the catch-all phrases of flat track or dirt track. Because of the influence and allure of *On Any Sunday* many people presume dirt track is just held on the mile-long horse tracks, but many GNC riders tended to be a specialist in one of the sub-categories. Miles have their aces, quirks and techniques, but so do the half-miles, short tracks (similar in size to British speedway tracks and often even tighter) and TT – dirt track with jumps. In the 1960s short track racers had been competing on Yamaha's small displacement two-strokes for some time before Yamaha US threw their weight behind the sport. With the release of their parallel twin XS650 they were ready to compete on the big tracks.

Enter Sheldon 'Shell' Thuet. "In 1970 Yamaha approached Shell and asked him to build a motorcycle capable of competing in flat track events and challenging the Harley-Davidsons," Alastair explains. "Shell took a purpose-built frame made by Trackmaster and modified some engine parts from the XS650 twin roadbike to produce a bike for Keith Mashburn. It won first time out on Ascot's half-mile track."

"Around the same time, the Palmgren brothers, Chuck and Larry, both professional riders, also realised the potential of the Yamaha motor and built their own Trackmaster 650cc racers with headwork by C.R. Axtell. Chuck gave Yamaha the first US National championship race win by a Japanese bike in September 1970."

Unlike Harley's XR750, which was and always has been a race bike engine, sold in sufficient quantities to homologate it, the XS650 came out of Yamaha's Brit-inspired road bike.

For the 1972 season Shell increased capacity to 750cc and was approached to run a team for Don Castro and newly qualified expert, Kenny Roberts. A year later Roberts was Grand National Champion. So, this bike, while not from that team, is a very similar spec, and has Shell's fingerprints all over it.

Alastair believes this chassis is unique, as it's an XS-spec Trackmaster with an adjustable swingarm pivot, something the firm built for some pros, but not many.

This Yamaha is a pure dirt tracker, not a bike built to emulate the racers. It has the right-hand shift, and narrowed primary case demanded by racers of that era. It has Shell's cams, big-bore and headwork. The 19in Akront wheels have a spool front hub and quick-change rear hub, so the huge disc and sprocket can be switched and the uni-directional tyre can be turned for a new edge (they only need to turn left, remember).

Ray Hensley and Walt Mahony have both passed away and the Trackmaster name has been bought and sold, but it's still possible to buy an identical frame and swingarm made to the same specification and on the original jigs for around \$2300 from Powroll in Oregon ([www.powroll.com](http://www.powroll.com)).

## SPES

### Engine/transmission

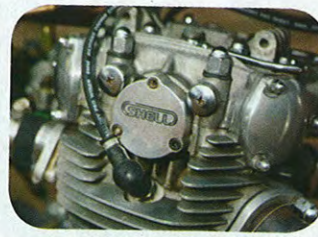
**Engine** Yamaha XS650 (bored-out to 750), air-cooled, 4-valve, parallel twin  
**Capacity** 750cc **Bore x stroke** 80 x 74mm **Carb** 2 x 36mm Mikuni  
**Clutch** Barnett wet clutch **Gearbox** Yamaha 5-speed **Ignition** ARD magneto

### Chassis

**Frame** Trackmaster chro-moly duplex frame **Suspension** (front) Betor 35mm forks with adjustable preload **Suspension** (rear) Progressive twin shocks **Weight** 300lb (approx) **Wheelbase** 56in (1422mm)  
**Fuel capacity** 9 litres (approx)



Disc and drive sprocket are interchangeable on the hub



Overhead camshaft engine gets the mark of a master tuner



Rear brakes were allowed from '69. Same side as gears though



36mm Mikuni carburetors and big air filters

They turn, and crash, on the left side. So brake, gear lever and exhausts are on the right



Back in Britain, but not quite in the same form that it left the BSA factory in 1971



# TRACKMASTER BSA A70

"The Harley is a rough old lump and the Yamaha is aggressive, but the BSA is so pretty, lovely and very easy to ride," says Alastair. It is pretty, no doubt about it, but how easy it would be to race on a bumpy, cushion, mile track in the rear-end of nowhere, while a pack of Triumphs and Harleys were breathing down your neck is debatable.

Alastair's trio of dirt trackers is completed by his Trackmaster BSA A70. It's from the same era as his Harley and proves that the Americans weren't the only ones to react to the rule change.

"Triumph quickly homologated a 750cc conversion for the 650cc Bonneville, and BSA needed more capacity from their 650cc A65 Lightning twin to remain competitive," explains Alastair. "By 1971 Japanese bikes were gaining ground, BSA depended heavily on the US market and racing was an important way of promoting sales – so they developed an export-only 750cc twin from the A65L to contest the US championship."

That export-only machine was the A70 Lightning but it became little more than a footnote to the BSA story – too little and too late to make a difference.

Still, Dick Mann, Don Emde, Jim Rice and Dave Aldana were the riders who formed BSA's impressive roster of talent at the time and they all competed on A70s.

"My bike was built at BSA's Armoury Road Factory in August 1971 in a stock frame with full road equipment and promptly shipped to Baltimore. Eric Witt, BSA's area representative for the West Coast, supplied it to racer Dan Perko of Colorado. He immediately had local tuner Rick Cook rebuild it into a Trackmaster oil-carrying frame."

Perko was one of hundreds of local riders across the United States, some of whom could beat the best on their day at their local track, but didn't have the commitment, all-round skill or drive to compete in the brutal and debilitating Grand National Championship. That didn't stop them building bikes that could compete at the sharp end though.

"Perko dominated the 750 class in Colorado, including four first places and one second from seven races at Coal Creek

Raceway between 1971 and 1973. He usually won if he remembered to fill the tank!" says Alastair of the bike's original owner.

And like all Alastair's bikes, the BSA's engine remains in the exact specification that a dirt tracker trying to earn dough and national points would have run. Period-perfect racing tweaks include MegaCycle race cam, super-rare ARD Fairbanks-Morse single-fire magneto ignition, lightened and balanced crank and a narrowed primary cover for better cornering ground clearance.

"[Ascot regular and Daytona 200 winner] Don Emde told me that racers used to fabricate these covers from aluminium sheet and saucepans to cover the clutch basket and crank end," says Alastair.

Other characterful parts include the Redwing shocks, Ceriani 35mm forks, Carlisle tyres on Borrani WM3 rims with Barnes hubs, Hurst-Airheart master cylinder and Flanders bars. The leather seat was made by 'The Hot Shoe Man', Ken Maely, who was famous for the steel soles that he made for flat-track racers' left boots.

This bike, like Alastair's other machines, ticks virtually every box when it comes to the 'must-have' parts for an early-1970s dirt tracker. That this trio of machines should belong to one man living in South Wales, only makes them even more remarkable.

## SPES

### Engine/transmission

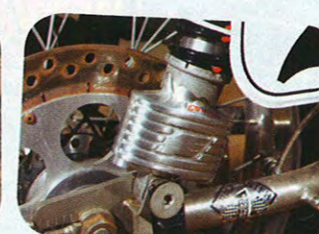
**Engine** BSA A70L, air-cooled, 4-valve, parallel twin. **Capacity** 750cc **Bore x stroke** 75 x 85mm **Carb** 2 x 34mm Mikuni **Clutch** Barnett wet multi-plate **Gearbox** Close-ratio BSA 4-speed **Ignition** ARD Fairbanks-Morse single-fire magneto with Mallory condenser

### Chassis

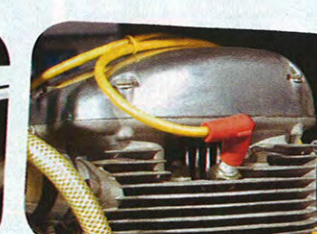
**Frame** Trackmaster oil-in-frame chro-mo duplex with 'S-sided' swingarm **Suspension** (front) Ceriani 35mm forks with adjustable preload **Suspension** (rear) Redwing KMX330 twin shocks **Weight** 300lb (approx) **Wheelbase** 56in (1422mm) **Fuel capacity** 7 litres (approx)



Modified case allows magneto drive from crankshaft



Redwing shocks are period dirt track fittings



Do the plug leads on your bike match the paint colour?



750cc BSA breathes through Mikuni carburetors