

DAVID FRY and the FRY-CLIMAX

David Fry is best known for the legendary Freikaiserwagen hillclimb and sprint special of 1936-1950, famously driven by his cousin Joe to a new hill record at Shelsley Walsh in 1949, and in which Joe was killed at Blandford hillclimb in July 1950.

A lengthy gap of eight years followed Joe's death before the Fry name appeared on a racing car once more. Then, for 1958, David Fry produced a completely new car to comply with the regulations for 1500cc-engined racing cars to the new Formula Two, introduced in 1957 to be one level below Grand Prix racing.

David Henry Colt Fry, born in 1918, was a direct descendant of Joseph Fry, founder of the famous Fry's chocolate business in Bristol over 150 years earlier. David's father Cecil had taken over as head of the family firm J.S. Fry and Sons in 1924, six years after it had combined with Cadbury Brothers' Midlands-based rival. The Fry's family home, Grove House[†], was in Frenchay, on the north-eastern outskirts of Bristol, and it was in the old stable buildings here that David began his early motoring and engineering activities. As a teenager his first cars were MGs, and in 1936 he joined the Bristol Motor Cycle & Light Car Club, and began competing in various west-country trials in his MG Magnette^{††}.

In the summer of 1936, before he started at Cambridge University, David and friend Hugh Dunsterville, then a Bristol University engineering student, built their own special to compete in sprints and hillclimbs – this was the original Freikaiserwagen. Although initial construction was carried out in the University's Merchant Venturers' Technical College workshop in Park Street, following completion the car was taken to its future home at Grove House.

David commenced his engineering degree studies at Cambridge that autumn, and over the following years revised and developed Freikaiserwagen, now in partnership with his distant cousin^{†††} Joe Fry, who was also at Cambridge, studying medicine. The pair campaigned the ever-improving car for the next four seasons, sharing the driving, but with David responsible for the engineering. All this motorsport activity brought David into contact with many from whom he could get help and advice, such as noted engine tuner Robin Jackson, and fellow competitor Alec Issigonis, who became a close friend. The future Mini designer was then in his thirties and a junior member of the drawing office staff at Morris Motors in Oxford.



David in the Freikaiserwagen in 1938

During this period David had also taken up flying, achieving his Royal Aero Club Aviators' Certificate in April 1939, and following the outbreak of war he volunteered for the RAF. He was initially assigned to 209 Squadron, Coastal Command, piloting Catalina (PBY) flying boats on maritime reconnaissance and anti-submarine missions around the UK coast. Rising to the rank of Squadron-Leader, in 1945 he was in Sicily, looking after RAF Augusta seaplane base.

After the war's end David briefly worked at the Horstman engineering company in Bath, but in 1949 set up his own engineering business, Frenchay Products Ltd., initially based in the old stables at Grove House. Also, with cousin Joe, he resurrected the Freikaiserwagen, and continued to develop and campaign the car in sprints and hillclimbs, with Joe, now recognised

[†] Now renamed to Riverwood House.

^{††} MG NA Magnette, registration BHY431.

^{†††} David and Joe were 3rd cousins, once removed.

as a top-class driver, doing most of the driving. The combination of David's engineering expertise and Joe's driving skills resulted in them famously breaking the outright hill record at Shelsley Walsh in June 1949. Tragically this all came to an end in July 1950 when Joe was killed in a crash at Blandford hillclimb in Dorset. The remains of the Freikaiserwagen were cut up, and David ceased all involvement in motorsport. The full story of Joe, David and the Freikaiserwagen is told in the book *Freik – The Private Life of the Freikaiserwagen* by Rob and Hugh Dunsterville.

David's father had died in 1952, and so by the mid 1950s the Fry family no longer had any direct involvement in running the chocolate business that bore their name, although David remained as a non-executive director of the Cadbury and Fry parent holding company, British Cocoa and Chocolate Co. Ltd.

Meanwhile David's Frenchay Products concern, where he was joined by his younger brother Jeremy for several years, had been steadily growing. In the early 1950s, they expanded into a new factory at Station Road, Kingswood, on the eastern edge of Bristol, with two modern factory workshops and an impressive two storey office block designed by renowned architect Leonard Manasseh[†].

The entrance hall at Frenchay Products in Kingswood



The main activity of the company, which had a workforce of around 250, was the precision manufacture of parts for the aircraft industry, acting as a sub-contractor. At that time this was a significant growth area, and Bristol was a major aviation centre with the Bristol Aeroplane Company (later British Aircraft Corporation) at Filton. Not only did Frenchay Products make complex components, but they also designed and built the specialised equipment needed to manufacture them, for example to machine skin sections for the BAC TSR-2 supersonic strike aircraft. Alex Moulton, famous for his rubber springing and hydroelastic suspension units, described David as *"a natural engineer, fascinated by the challenge of complicated manufacture"*^{††}.

In addition to aviation work, Frenchay Products also undertook other projects, one example being the construction in 1958 of the prototype aluminium monocoque chassis for the radical small-wheeled bicycle that his friend Moulton was developing in nearby Bradford-on-Avon.

This was the background to David embarking on a new engineering challenge, and re-engaging in motor sport, with the design and construction of a radical new racing car at the Station Road factory.

The Fry-Climax

By the late 1950's the trend for successful racing car design was now moving to the rear- or mid-mounted engine - the layout chosen for the Freikaiserwagen twenty years earlier, and by Dr. Porsche before that. So David's placing of the engine behind the driver in his new car was no longer unconventional. In a layout very reminiscent of the Freikaiserwagen the engine was mounted forward of the rear wheels and the driving seat positioned close to the front wheels, while the fuel tank was positioned just behind the driver. This resulted in an ungainly looking car when compared to the rear-engined Cooper, the leading marque in Formula Two at that time. Perhaps unsurprisingly, given the nature of his business and a desire to innovate, David used aircraft construction techniques to create a stressed-skin, or monocoque, chassis. This was at a time when most racing cars still employed a tubular-frame chassis. Another novelty for the time was the detachable steering wheel.

The suspension of the Fry was unorthodox, with rubber springing all-round. Although precise details of the original design are unknown, a hint comes from Autosport reporter Martyn Watkins who, commenting early in 1959 on the car's winter modifications, noted that it now had

[†] Leonard Manasseh later designed the new National Motor Museum building at Beaulieu.

^{††} Alex Moulton, *From Bristol to Bradford-on-Avon - a lifetime in engineering* (2009).

"wishbone rear suspension in place of the rubber bands". So perhaps David employed a layout similar to that of the final version of the Freikaiserwagen in 1948, an arrangement of swing axles with springing by rubber strands in tension? He also used (or at least tried) exotic aircraft alloys for suspension parts, although it's been related that this resulted in a wishbone breakage during testing on Filton airfield, with subsequent damage to the car.

Disc brakes were fitted all round, still unusual then on single-seaters, with Cooper only offering them as an optional extra. A 4-cylinder 1500cc Coventry Climax FPF twin-cam engine, with a pair of SU DU6 twin-choke carburettors, was used. The FPF was a lightweight alloy racing unit derived from a fire pump engine, which was readily available and the engine of choice for British Formula Two competitors. Drive was transmitted to the rear wheels through a Volkswagen gearbox. The Fry was said to be beautifully engineered throughout but, at around 8 cwt., too heavy.

The 1958 season.

The new car was tested extensively at Silverstone by Michael Parkes before making its race debut in the summer of 1958. Twenty-seven-year-old Parkes had previously done some sports car racing and early on in the project had offered to help out in his spare time.

After leaving school Parkes had joined the motor manufacturing Rootes Group, and by the early 1950s was working as a development engineer in their experimental department at Ryton-on-Dunsmore, near Coventry. He also began dabbling in club motor-racing, using MG and Frazer-Nash sports cars, and then in 1957 a Lotus 11, with some success. Mike's father John Parkes was head of the Alvis car company in Coventry, and after Alec Issigonis joined Alvis as Chief Designer in 1952, he and the Parkes' family became good friends. With Issigonis also being a close friend of David Fry's, he was aware of David's embryo racing car, the upshot being that Mike offered to help with the car's development. Mike also involved another helper, friend and Rootes colleague Tim Fry - at that time they were both working on what would become the Hillman Imp - the pair regularly travelling to Bristol at the weekends. Although initially unknown to either, Tim Fry was actually very distantly related to the Bristol Frys - and later he would marry David's step-daughter.

The Fry's first race, and Parkes' single-seater debut, was at Brands Hatch on 8th June in the 25-mile Formula 2 race. Qualifying a lowly 13th of the 14 entries, he spun off at Bottom Bend on the fifth lap of the first heat, and then retired from the second.

A month later at Crystal Palace results improved, with 6th fastest in qualifying for the Anerley Trophy F2 race, then 6th and 5th in the heats to give an aggregate 6th place overall. Parkes and the Fry then appeared in a few Formula Libre races at club meetings, winning a heat at Mallory Park, but retiring when leading the final, and the running fourth at Snetterton before again retiring.

Success then followed when he won at Silverstone on the Club circuit on 20th September, although this victory was not achieved without difficulty. Parkes took the lead about halfway through the 15 lap race and opened up a gap sufficiently large to retain first place, despite suspected fuel starvation bringing the car down virtually to walking pace on its last four trips round Woodcote corner.



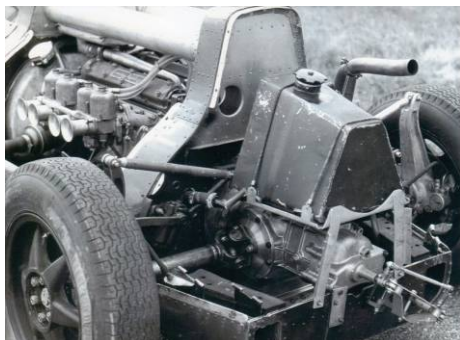
Winning at Silverstone, September 1958.

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By now the bodywork had been cleaned up with a narrower and slightly sleeker nose cowl, while the high windscreen was now fully wrap-around and blended into the rear engine cowl. The only foreign excursion then followed, to Montlhéry near Paris for the F2 Coupe du Salon; Denis Jenkinson, reporting for Motor Sport magazine, referred to it as *"the interesting & beautifully made Fry-Climax"*. Here Parkes qualified sixth of nine, but retired on the first lap of the race with gearbox problems.

The 1959 season.

Not really having proved competitive against the Cooper opposition, David further developed the car over the winter of 1958/59 and it reappeared in April visibly different. Attention to the aerodynamics resulted in a distinctive high tail fin being added on top of the engine cowling. A 4-speed all-synchromesh close-ratio Porsche gearbox replaced the original Volkswagen unit. The Fry now also had revised independent suspension all round, with double wishbones at the front, and trailing arms and high-set transverse locating bars at the rear. Springing was by rubber cords in tension, connected by chains running over sprockets. Chassis tuning during practice involved *“changing the front anti-roll bar at the front end and also altering the number of rubber rings in the suspension boxes and how they were connected to each other and to the chassis,”* according to helper Phil Laughton.



(left) Revised rear end



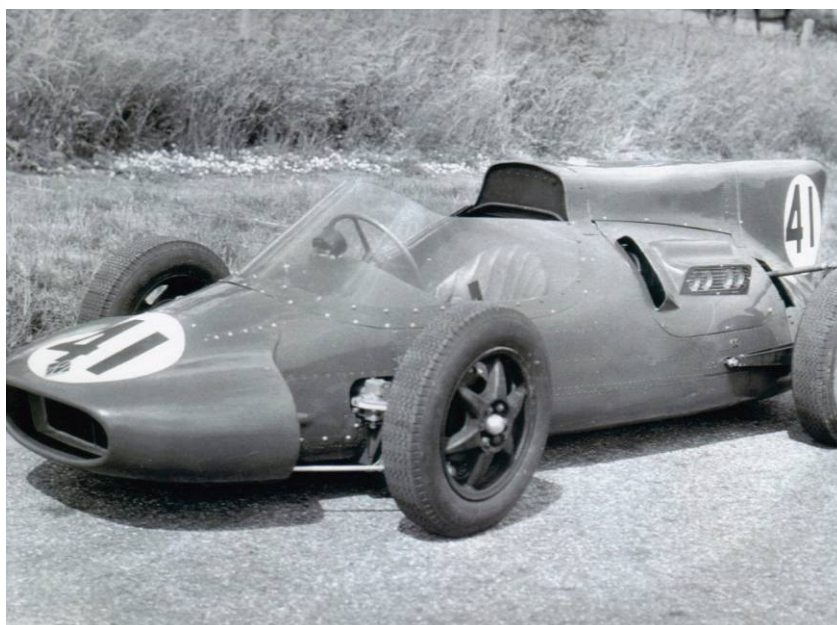
(right) Front suspension

Parkes was again the driver for 1959, and the blue car initially ran well in a couple of club Formula Libre races before retiring - at Snetterton, when running second (*“hit something solid”*) and at Silverstone, while dicing for third place (broken wishbone). Then, at Mallory Park at the end of June, they qualified fourth out of 14 to start on the front row of a Formula 2 grid of reasonable quality. Parkes finally finished fifth, the race being won by Tim Parnell in a Cooper.

The next appearance was at the British Grand Prix at Aintree, which that year included both Formula 1 (2.5 litres) and the 1.5 litre Formula 2 cars. With a large entry competing for the 24 places on the grid Parkes and the Fry were among the five who did not qualify. Further outings in minor British Formula 2 and Libre races followed, with an 8th place at Silverstone and a 6th at Mallory Park being the best results.

Back at Silverstone in September, gearbox problems intervened once more, with Parkes leading for several laps but then retiring, unable to select gears. Then, in the combined F1 and F2 race at Snetterton on 10th October, the Fry finished 12th of the 23 entries and 7th in the F2 category.

The final outing for David's creation was at the 1959 Boxing Day Brands Hatch meeting, where, in pouring rain, Parkes placed second behind Ian Raby's Hume-Climax in the 15 lap Formula Libre race.

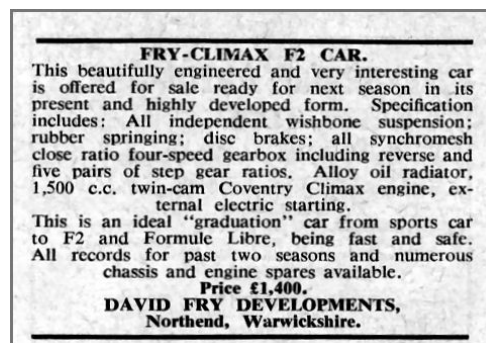


The Fry-Climax in 1959 (Photos courtesy of Alan Freke)

Afterpiece

Shortly after the car's final race at Brands Hatch it was offered for sale, being advertised in the 8th January 1960 issue of Autosport for £1,400. It would appear that there were no takers, as in January 1963 Parkes loaned the car for display at the Birmingham Motorists' Fair at Bingley Hall in the city centre.

The Fry-Climax did reappear later in 1964 when JD Turnbull of Malmesbury, Wiltshire, entered it at Prescott hillclimbs and the Weston-super-Mare speed trials, but its subsequent history and fate is unknown.



Just a few years later, in 1967, David Fry died of a heart attack, at the relatively young age of just 49. In 1976 Frenchay Products Ltd. was acquired by the Alfred Herbert machine tool group, then three years later, in 1979, sold on to Fairey Hydraulics. The factory in Station Road, Kingswood was demolished in 2011.

Fry-Climax results 1958-59

Entrant: D. Fry Developments. Driver: Michael Parkes					
8.6.58	Brands Hatch	BRSCC (F2) - 2x10 lap heats	110	Rtd.	Spun off at Bottom Bend on 5 th lap of heat 1; retired from heat 2.
5.7.58	Crystal Palace	Anerley Trophy (F2) - 2x10 laps	39	6 th	6 th heat 1, 5 th heat 2. 6 th on aggregate
4.8.58	Mallory Park	Formula Libre – 2x10 lap heats + 20 lap final	16	Rtd.	1 st heat 1. Retired from final on lap 12 after leading for 6 laps
7.9.58	Snetterton	Scott-Brown Trophy (F.Libre) - 15 laps	93	Rtd.	Ran 4 th ; retired on lap 6 from 5 th place
20.9.58	Silverstone Club	Formula Libre - 15 laps	185	1 st	Led from start
5.10.58	Montlhery	Coupe du Salon (F2) - 20 laps	18	Rtd.	Retired lap 1, gearbox
19.4.59	Snetterton	Formula Libre - 2 heats	117	Rtd.	Heat 1, retired from 2 nd place on lap 2, hit "something solid"
13.6.59	Silverstone Club	Formula Libre – 2x10 lap heats + 20 lap final	40	Rtd.	3 rd Heat 2. Retired lap 12 of final while dicing over 3rd/4th position; broken wishbone.
28.6.59	Mallory Park	BRSCC (F2) - 30 laps	92	5 th	
18.7.59	Aintree	British GP (F1 & F2)	60	DNQ	
26.7.59	Snetterton	Vanwall Trophy (Racing cars) – 20 laps	22	8 th	
2.8.59	Mallory Park	Formula Libre – 2x7 lap heats + 15 lap final	92	6 th	7 th in heat 1, 6 th in final.
3.8.59	Brands Hatch	John Davy Trophy (F2) – 2x25 laps	39	Rtd.	9 th in heat 1; retired heat 2 lap 7
29.8.59	Brands Hatch	Kentish 100 (F2) - 2x42 laps	40	DNQ.	
19.9.59	Silverstone Club	Formula Libre - 15 laps	129	Rtd.	Retired lap 6 when leading; gearbox
10.10.59	Snetterton	Silver City Trophy (F1&F2) – 25 laps	25	12 th	7 th F2
26.12.59	Brands Hatch	Silver City Trophy (F.Libre) – 15 laps	45	2 nd	

Additional note

In 1961 a set of the Fry's unique six-spoke alloy wheels appeared on Ray Fielding's new Emeryson-Climax sports car.

*Pete Stowe
December 2020*

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Westcountry Motorsport History

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petestowe @ talktalk.net