

THANK U2 VERY MUCH

The story of Arthur Mallock's cars, past, present & future

ARTHUR MALLOCK lives at the end of a cul-de-sac in the pretty Northamptonshire country village called Roade. With his military moustache he bears a marked resemblance to author George Orwell. A former major in the Army he now works in electronics but cannot be drawn any further due to the Official Secrets Act. He is very much a family man with two grown-up sons and a younger daughter and at 50 (he looks at least 10 years younger) you would think his hobbies would be the garden or the local council. But motor racing enthusiasts the world over know that his hobby is driving, designing and constructing racing cars. They also know that over the years his cars have notched up countless successes and barely a week goes by during the club racing season without a spate of further victories.

After deciding that a feature article on Arthur Mallock and his U2s was well overdue in the columns of *Motoring News*, the good G.P.O. delivered a letter to Mill Cottage asking if I could visit his factory. Back came the reply that there wasn't really a factory and which evening suited me most as he worked during the day. So two popular myths were already exploded and as I veered off the M1 towards Roade a couple of weeks later, I wondered what further revelations awaited me. Little did I guess that the man I always considered to make swing axles work better than anyone else would tell me that his 1968 modifications would include wishbone front suspension, but more of that later.

WJ 1515

The Mallock motor racing story really started just after the war in which he served in the R.A.F., flying Dakotas and was then transferred to the Army with the rank of major. He made his racing debut in 1947 (now many other drivers have been

at it 20 years and still as com-

was back in 1956 with quite a few engine modifications gleaned from the then stringing Colin Chapman. That season proved to be successful but the car was still not a winner and some chassis mods were made over the winter, but Mallock's 1957 season was cut short by an engine blow-up.

It was 1958 that the dirt came and the story of the U2 as a U2 really starts. Faithful WJ 1515 came in for some radical modifications for although the LMB suspension lay-out had always shown good cornering it suffered from the fact that the rear quarter ellipticals restricted the lowering of the driver's seat. So an entirely new semi-space frame was built with side members of 1/2in. square tubing and the superstructure of 3/4in. square tubing. The car was much lower, Mallock sat right down in it and suddenly it looked like a U2. In only its second race the Brands 1172 record was broken, but a week later a similar fate befell the crank and the project came to a temporary halt. Meanwhile Mallock moved from his home only three miles from Brands

but somewhat flamboyant style. That year his five wins included a trip to Ireland to win the very competitive Ford Championship of Ireland and four second places. At the end of 1959 he offered to build a replica chassis frames and two were sold, but he has never seen them since. WJ 1515 was also sold during the winter so that finance for a new car would be available.

U2s START TO SELL

The new car was built to meet the new Formula Junior regulations for less than £400 with the hope that it would not disgrace itself in International competition. The new chassis frame was

part in quite a few Continental races with promising results (he was timed at 137 m.p.h. at Reims) and later on October 16, to be exact, with his huge 6ft. 4in. frame sticking well out into the airstream, he won the Eifel-remen F.J. race on Nurburgring. South Circuit in terrible weather. Mallock also chalked up his first F.J. win before the year was out.

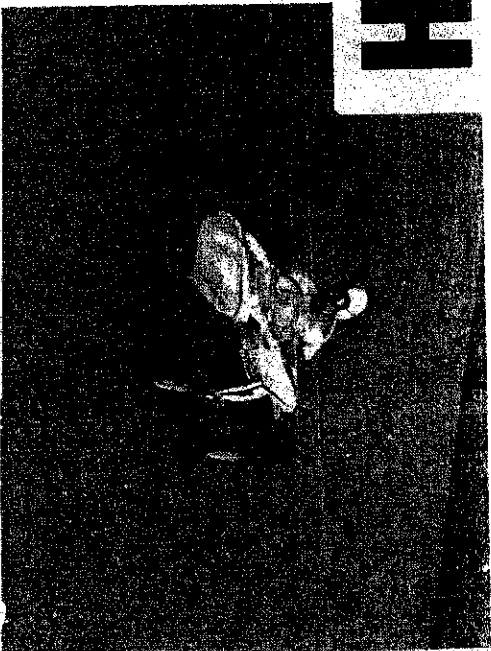
Mallock offered replicas of the chassis/body assemblies for sale, you had to find the rest of the pieces yourself and until this day still do. At £57.10s. he found several takers although the customers built 1172 and sports cars rather than F.Js. Indeed



ORIGINAL U2. WJ 1515 as it looked after the new frame had been built. Here it is fitted with the original Austin 7 radiator but this was replaced by a cut-down version.

similar to the Mk.1 but had the side members extending to the full width of the body using mainly 18g. square section wood. Award winner and F.3 driver Peter Gaydon first made his name in 1965. The Mk.2 continued into 1962 and Mallock reverted back to 1172 Austin 7 unit used on the original car and there were other tweaks. Originally two of these F.J.

F.J. WINNER. John Harwood, an enormous 6ft. 4in., sticks out of his U2 Mk. 2 while dicing round the Eifelrennen. He won the 1960 race in appalling conditions.



sports car honours, the Chevron, a very much more sophisticated and expensive machine. Wraggs has long been a U2 expert, having previously raced successfully a Mk. 2 and a Mk. 4, 1965 saw the inception of the Clubman's Formula with rules specifically framed to take in the Lotus 7, DRW, U2 and other such small sports cars using Ford or B.M.C. engines and non-all-enveloping bodies. U2 and Chevron dominate this formula until this day.

Arthur Mallock has always advocated very narrow track, but by 1966 the speed-up in tyre development brought father and father rubber and a rethink was necessary. So when the Mk. 6 appeared the swing axle overlap was increased by four inches and the front track widened by seven inches, while at the back the radius arms had been placed outside the frame. This did the trick and wide tyres could now be utilised and a second immediately fell from lap times at places like Silverstone Club and Malory. In fact, many earlier U2s have been converted to this specification. For 1967 the Series 2 or Mk. 6B was produced with the engine 4 1/4 in. further back, and of course, there have been many more wins. Mk. 6s in the hands of Max Mosley, Jeremy Lord, Brian Myers, Dave Darby and plenty of

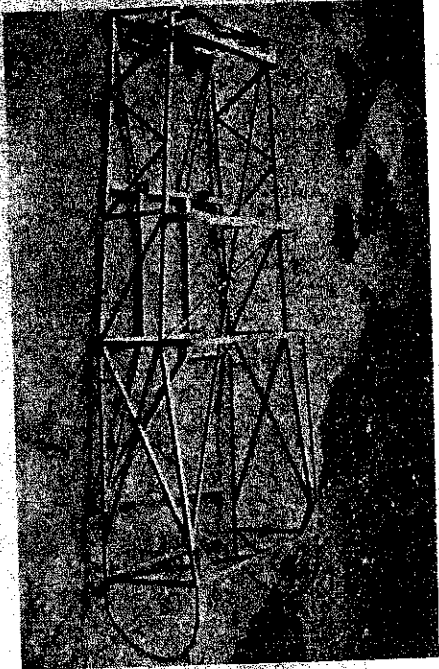
6 chassis to be built, and the workmanship was obviously of a very high standard. Most of the other work, like steering column bosses, modifying the front axle beam and so on is contracted to local firms, while Mallock has all the local breakers yards keyed up to find him back axles and so forth.

At the price of £80 the chassis is now sold with virtually all welding completed and all brackets in place. On earlier models there used to be quite a lot of work still left to do on a chassis. Mallock has a very good line in 24 gauge Duralumin for paneling and he recommends four 6ft x 3ft. sheets at 30s. each. Paneling is very simple as there are no double curvatures so all you need is a pop rivet gun. A shaped bonnet comes at £9 and he recommends four 6ft man Imp Ltd units, which Mallock can also provide along with the column, wheel mountings, etc. Springing is by Armstrong AT7 spring/damper units at £4.8 a time, and the back axle has to be modified and Mallock provides a fully modified casing with the four trailing arms and Panhard rod at £18 exchange. Mallock has a stock of swing axles from Ford, 93As at £1.10s.

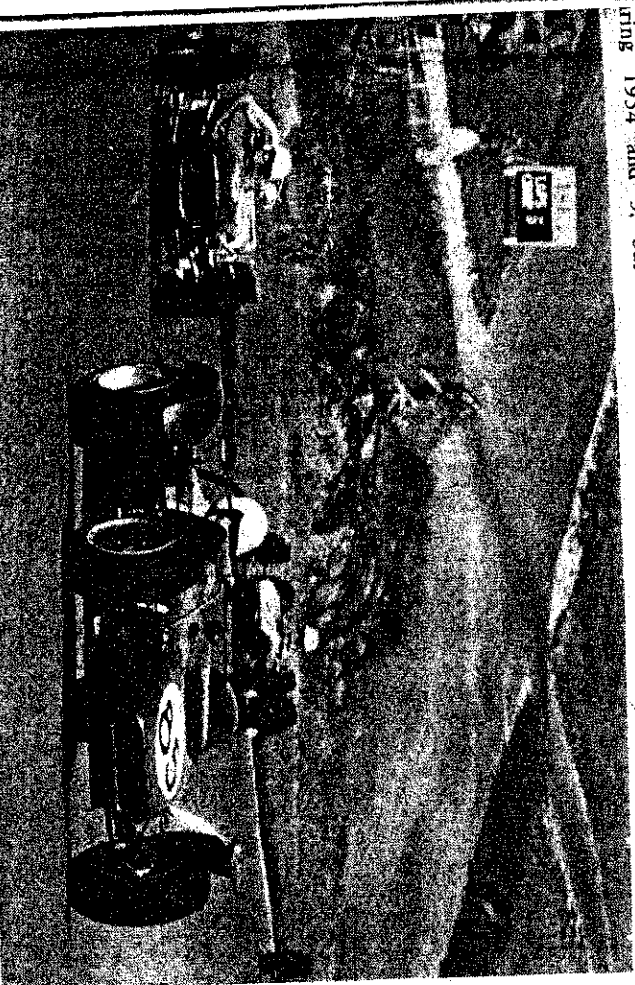
ing debut in 1947. (Now other drivers have been in 20 years and are as common as Mallock's?) using a revived LMB suspended chassis. Seven Special registration numbers WJ 1515. Several later this same car was play a significant part in the U.2 story. The Austin engine was soon replaced by a Speedway-JAP engine in a Speedway-U.2 style. It is true U.2 style is likely combination was run 500 F.3 events for a couple seasons with a notable success. This car was then stoned off and a special led a CRM purchased, but also proved unreliable. With the turn of 1953 and 750 M.C.'s brand new 1172 formula. WJ 1515 was dusted in and fitted with a 1936 rd 8 engine. Mallock took the first two places at 1172 race in which Lotus took the first two places. The end of the season Mallock was regularly the first in-Louis driver home and a strange change of fate that a present-day Clubman Lotus drivers proudly announce at they were the first non-2 home.

An overseas posting kept Mallock away from racing during 1954 and 5, but he

Mallock moved from his home various other these weeks only three miles from Brands Original. Two of these F.1 left the Army and arrived cars were to be laid down, at Roade which is only eight one for Mallock and another miles from Silverstone. Thus for Major John Harwood, another settled, he was back in 1959 Army friend of Mallock's, Harwood's car now very com- woods' car was completed by petitive as a Ford Ten engine June while Mallock was side-had been fitted. Mallock pressed tracked by trials and go-kart on to such an extent that he projects and his car was not became known as the "Mad completed until August. By Malor," thanks to his safe this time Harwood had taken



BASIC FRAME. All U.2s start with a basic frame produced to Mallock's design by Arch Motors. This is actually a Mk. 4 frame, the latest Mk. 6 is basically similar but has more brackets, etc., included.



FASTEST U.2 driver this season has been Max Mosley with the Meadehead Racing

Formula due to the using costs of F.1 and in 1962 achieved a long standing ambition by winning the 1172 Championship.

The success was achieved because of the remarkable handling ability of the U.2 which must be attributable to its very rigid but light multi-tube "birdcage" frame. All six sides of the "Box" are triangulated resulting in a torsional rigidity claimed by Mallock to be 1,500lb ft. per degree deflection, twice that of say a Lotus 23.

For 1963 there were quite a few changes for the old quarter elliptics were finally done away with and replaced with much softer coil springs and so now we had coils all round. At the front a cross-over system for the swing axles was devised giving 30 per cent more swing length and this eliminated the limitations of conventional swing axles which become quite confused on bumpy surfaces. The engine was also moved back 4 1/2 in. and the Mk.3 was born. During 1963 there were quite a lot of problems with this new suspension lay-out, but Mallock again won the 1172 Formula Championship and when the Mk.4 appeared a year later there was little difference except for general tidying up.

Mallock went single-seater racing again in 1964, this time to the new F.3 specification and again put up some surprisingly good performances amongst the Brabhams and Lotuses in what now was the only front-engined car in serious single-seater racing.

The Mk.5 was introduced in 1965 and again the differences over the previous model were not great although the engine was moved forward for accessibility but this was not really a success. In fact it is true to say that Marks 3, 4 and 5 are very similar and as some are brought up to later specification very easily it is extremely difficult to tell one from another.

During this period Mallock was selling kits regularly and there was then over 20 in existence. Championships were again captured for David Wragg clinched the Radio

Jeffery Lord, Brian Myers, Dave Darby and plenty of others have scored enormous success over the past couple of years with 1,500 c.c. engines while earlier this year Ken Miller with James Mortimer's 1,000 c.c. Holbay-powered car had 12 consecutive wins.

This year Mallock has raced with a Mk. 6 fitted with a twin cam Cosworth Mk. 13 engine, has taken part in several International F.2 races and earned himself almost £700 starting money. At the other end of the scale, his son Richard, who works for Aston Martin, has been racing his Formula Ford powered car in various events with a promise. Richard's U.2 was built originally as a road car with a wider cockpit and he has put on quite a mileage without any problems apart from getting wet when it rained.

A few U.2s have gone abroad for there are two in New Zealand, one in South Africa, another in the States, while a couple have been built under licence in Australia. Altogether well over 50 U.2s have now been built, including 17 during 1967, but Mallock does not know the exact number as chassis numbers were a luxury he only introduced this year.

BUILDING A U.2

"How much does it cost to build a U.2?" I asked but the answer seemed to be the same as the reply to the one about the piece of string. Of course, everything depends on the specification, which can be varied, and the cost of the engine. A very basic 1172 car could probably be produced for £300 if one did all the work one's self, but a more realistic price for a Clubmans' car, less engine, gearbox and labour would be about £500, while a winning car like Mosley's complete with a £400 engine and various other goodies, could cost over £1,000.

Mallock does not actually make anything himself, for the chassis is produced by Arch Motors, who build the frames for Brabham and the majority of other British single-seaters.

Throw in one of Mallock's special radiators and oil cooler, a Lockheed brake kit, stub axles, a set of wheels, differential and a few other assorted bits and pieces and your U.2 is well on the way. A new 116E close ratio gearbox is recommended, an aluminium bell housing and then an engine to suit your needs and pocket. Obviously the person building a U.2 will need to spend all his leisure time during a winter if he wants to have his car ready for the next season. But Mallock's system of giving a customer a complete parts list with options to suit the pocket and telling him to get as much of the stuff himself and "if there are any problems give me a ring" is a good one. So one can generally assume that the man racing a new U.2 is a pretty good mechanic too.

Of course, not everyone has this talent, but you could always go along to a firm with U.2 experience, like David Wragg, in Sheffield, or Meade speed, in London, for help and encouragement.

Once your car is complete, Mallock offers a rather unique after sales competition service for he will sort your car out for you at a track and even race it for you if you twist his arm enough. In fact, there is quite an art in setting up U.2s properly and Mallock insists that this can make all the difference.

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ARTHUR MALLOCK, in his racing kit, with his military motorcycle, has become a

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ance to the handling. He claimed to me how this was the best but it seemed rather com- ated and would be best to Mallock himself.

THE FUTURE

Mallock now feels he has to the crossroads, on both business side of U2 as well the design. Next season he will be offering two models, Mk. 7 Formula Formula which I be narrower than previous and a similar but wider thmans car called the Mk. The front suspension will by wishbone layout similar that on the present Barb n. For Mallock says orces less no, so much, in ing something new, as giv up something old. One 2 has already appeared, but shobe front suspension, but s was privately modified. After this year it went very ill in the hands of Tony core. At present the two new drels are on the drawing

board, but the first cars will be ready by April. In 1968, Mallock will be putting all his effort into Formula Ford and although the cars will have to be weighted, he thinks that they will dominate the formula.

In fact, he is positively excited about U2 prospects in the formula. Until the present, U2s have been more of a hobby than a business for "it pays for the racing but there is certainly no money in the bank as a result," says Mallock, snorting through his nose to emphasise the point. The whole operation is run from Mill Cottage, a derelict garage next door where all the spares are kept and a couple of adjoining garages. In one of these when I visited, Richard Mallock was busy painting a frame to earn money for his new season's car, while 16-year-old Raymond's home-constructed go-kart was gathering dust on one side as he hopes to start racing next season with a strict budget 1172 car. Racing is in the Mallock blood.

Arthur Mallock is now considering building complete cars less engine, but will obviously have to find new premises and

the feelers are out. He does not intend giving up electronics just yet, but he might one day. Finally, let us dispel one rumour, there is not a rear-engine U2 on the stocks. This rumour has arisen because a friend of Mallock's is building a three-wheeler for motor cycle racing and hill-climbs. Mallock has helped with the design of the rear-mounted imp- engine car which will feature U2 type swing axle front suspension, but that is all.

Arthur Mallock is of the same breed of men as Colin Chapman and Eric Broadley, for all three's racing and business came from the same beginnings. That Chapman now heads the Lotus empire and Mallock still builds U2s in his spare time is governed by several factors, but among them no doubt is the fact that the whole psychology of U2 is based on being philanthropic. In this age of commercialism this is a refreshing attitude. Perhaps a quotation from Robert Louis Stevenson would be appropriate: "Wealth, I ask not, hope nor love. Nor a friend to know me. All I seek, the heaven above, and the road below me."

A.R.M.



F2 U2. Arthur Mallock leads Alan Rees, and a Protos, during the Zandvoort F2 race. He took part in several such races with his twin-cam powered car and earned almost £700 start money.