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A Tale of 2 Ultima

An Ultima GTR Is Built in England and an Ultima Can Am Is Built the American Way; We Show You Both.

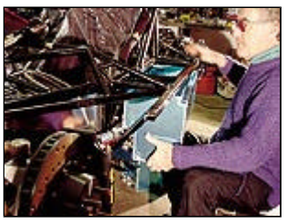
By Doug McCleary, Nigel Dean

We were recently made aware of two Ultima kits being built on opposite sides of the Atlantic: a racy, sleek Ultima GTR, built by Englishman Nigel Dean, and a sexy, competitive Ultima Can Am, built by American Jack Rosen. What follows are these two builds, showing the by-the-book, factory-accepted work in the UK vs. the customized individuality approach here in the States. We think it shows that the Ultimas are awesome cars that can be built, driven, and raced successfully both ways, and it's your choice as to how YOUR finished Ultima will emerge.

--Mike Blake, Editor

If a street-legal McLaren car is your dream of the ultimate automotive project, then the Ultima is one central character that should enter that dream. Whether it is the Can Am model or the GTR version, Ultima is one sporty, racy street car that can compete big-time at track events.

In one build-up approach, The USA's Jack Rosen put his own mark on his customized Ultima Can Am, with inventiveness and deviation from the norm, while another approach was embraced by the UK's Nigel Dean, who went by the book to finish his Ultima GTR.



With all coolant hoses and wiring secured, Rosen slips one of two storage boxes in place. Each box is large enough to store a change of clothing for those overnight trips.

Customized in the USA

Jack Rosen, an airplane engineer and competitive racer said, was intrigued by the Can Am: "The Ultima is, in my opinion, the only car different enough from the norm of kit cars available. I wanted to see an Ultima in person, so I went down to the Daytona 24 Hour, where K&N Filters had a GTR entered. I wanted even more so I went to the Carlisle Kit Car Nationals and saw their Can Am in person. I was sold on the spot. There's nothing else out there like it."

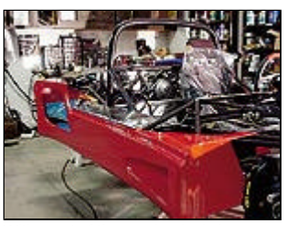
He continued, "According to the sales literature, 'Ultima is the UK's leading self-assembly supercar manufacturer.' The Can Am looks more slender and streamlined--it's like a grown-up version of the old car. The Spyder may have been a toy, but the Can Am is for when you want to get seriously hardcore!"

Taking its inspiration from the awesome mid-engined racers that competed in the American Can Am series during the '60s and '70s, the Ultima Can Am represents a modern interpretation of these amazing machines.

The removable rear crossmember modification makes installing the engine/transaxle a snap.

At the heart of every new Can Am is the company's race-proven space frame chassis engineered to accept a mid-mounted Chevrolet V-8 engine mated to a five- or six-speed Porsche transaxle.

The Ultima's powdercoated chassis is a full 100-inch wheelbase space frame, constructed of 38mm and 1.5mm tubing with 16-gauge aluminum panels.



With most of the mechanicals in place, the body sidepods are installed next.

The suspension is traditional, unequal-length, double-wishbone with cast LM25 aluminum uprights and adjustable special Ultima coils over Intrax shocks on all four corners. Customers can choose between Urethane, Nylatron, or Rose joints.

The 2.4-turn steering rack has its input shaft in the center, making it universal for left- and right-drive applications. The rack and all other steering components were supplied by Ultima.

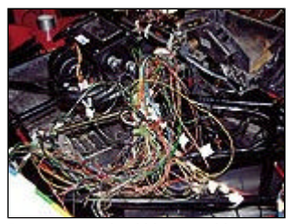
A Porsche G50 transaxle transmits the estimated 500 hp that Rosen's '72 GM 350ci engine will produce.

Power for Rosen's Ultima Can Am started with a '72 Chevrolet 350ci block. The engine modifications, performed by Motor Tech in New Bedford. Massachusetts, include stoking to 383 with an Eagle stroking kit using the H-type casting. The Federal Main bearings have been bolstered with four-bolt splayed caps.

Because the engine is expected to turn up to 8,000 rpm, Rosen machined a custom, dual-belt large alternator pulley to reduce the likelihood of overdriving the 65-amp alternator. The Ultima provided polished stainless steel headers, and a Canton racing oil pan with baffles will help keep the oil at the pump

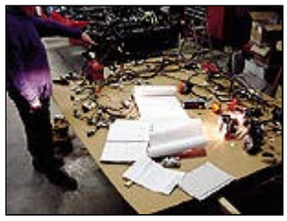
pickup during the hard corning at New Hampshire International Speedway and Watkins Glen Raceway. To keep things properly lubricated, a high-volume oil pump moves a whopping 9 quarts of oil from the windage tray-equipped large volume pan through an Earl's cooler.

A high-torque starter spins this mighty 383 to life at Rosen's command and an Edelbrock 3500 port fuel injection unit takes care of the fuel metering chores. The 8/30-pound injectors provide enough fuel to make the expected 500-plus hp. Edelbrock provides, as part of the kit, a cockpit-mounted tuning module to allow Rosen to modify the fuel map in real time. A different fuel map will be created for drag racing, road racing, or just plane cruising.


Rosen customized his own wiring harness, eschewing the one that came with the kit.

When it came to cooling, Rosen turned to Edlebrock once more for a water pump. Coolant is pumped forward to an aluminum nose mounted radiator fitted with two electric fans. Stainless steel hoses with A&E fittings are used for heater. A burst hose in the cockpit would be disastorous.

The body is unstressed hand-laid GRP, with a color gelcoat. The front cowl is intended to be riveted on, but Rosen has chosen to make it removable for service.


Before installing the wiring harness, all functions were verified.

Rosen opted to pay extra to have the body flashing trimmed and for mounting of the doors and mounting of the body. He touted, "It costs extra but well worth the expense." Ultima shims the body for a proper fit and tapes the shims in place so when you remove the body, all the shims will remain where needed.

Ultima offers two windshields: a low, LeMans screen and the full glass screen. Both are mounted on their own frames, so either one will drop into a specially molded section on the main scuttle panel. Rosen purchased both and will change them out depending on the situation.


Rosen also customized his own dash. The swing-down control panel makes access to the switches a snap.

Rosen's Can Am has a soft roof, but it only usable with the full windshield. The half, LeMans-style windshield is intended for those spirited wind-in-your-face days.

Rosen chose to change out his wiring harness and its 86 circuits. He cut the harness apart and strung it out, using a buzz box and multimeter, starting with the circuit breakers. With the harness laid out with battery, switches, lights, gauges, etc connected, Rosen tested each circuit to ensure all would function correctly.

Rosen decided the smart thing for him to do was create his own wiring diagram to fill the needed information gap. The engine harness, intended for a front-engine car, also required reworking to fit this rear-engine application.


The ignition electronics are located behind the passenger seat.

Once Rosen sorted out the wiring, he routed the harness down the passenger sidepod. Because everything is center-mounter, the harness is long enough that it could fit on either side, left or right.

Because of the tight fit in the foot box, Rosen chose to fabricate his own gas pedal and left foot rest. It "wound up to be more work than I thought, but you know what they say." He also fabricated his own dash to his own specs. The interior of the Can Am has aluminum panels riveted to the frame members with a lot of rivets. Rosen has built small airplanes in the past so was prepared for this monumental task. "I bought the (pneumatic) riveter from Harbor Freight." "The majority of rivets used were 1/8-inch diameter, aluminum rivets with a steel shank." The majority of them were put in place by hand, then popped. Where there is easy access to the rivets, you can easily do one every five seconds.

At 44 inches high, the Ultima's position is low to say the least. Rosen said, "It's a little bit 'smushed' in the front, but that was the style of the Can Am. The long rear section tells you that there is a lot of power back there, even if there might not be.

"It has to be one of the most eye-catching cars on and off the road. Anywhere I park it, it attracts a crowd, which is fine, unless I'm in a hurry to leave the car and people are offended if I don't answer their questions.


Much-needed access is gained through a custom hatch fabricated by Rosen.


A finished CanAm...done Rosen's way.

"It's great to drive, and with the long windscreen, it's relatively blast free in the cockpit. However, since I worry about maintenance, I installed a removable crossmember to keep me from doing gymnastics every time I need to work on something."

Ultima chief Ted Marlow believes that a modified Ultima is considerably slower than an Ultima spec car. He told us that the track car is much slower than the standard Ultima spec road car. On the track at Run and Gun, Jack Rosen brought his Ultima Can Am to Second Place finishes on both the road course and autocross and a Second Place overall Top Dog trophy in his class. That's pretty fine results for a customized car that the factory said might be faster under factory supervision--not bad for a "custom" job.

By the Book in the UK

In the UK, since the tender age of 17, Nigel Dean promised himself that he would own a LeMans Group C-style road car. Twenty years later his dream became a reality. Unable to afford a McLaren F1 road car, the alternative came in the form of the awesome Ultima GTR. Dean said, "Produced by Ultima Sports Ltd, there are few component cars to match

the quality and staggering performance of this package."

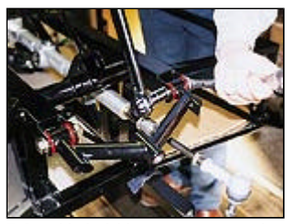
The first job was to construct a passenger cell from NS4 16swg aluminum sheets. All panels are delivered cut and formed to size. The photo shows the cabin floor. Panels are attached to chassis by more than 1,000 pop rivets and bonding adhesive.

The standard GTR kit is comprehensive to say the least. Every last nut and bolt is supplied to complete the car bar the engine and transaxle. Ultima can supply these too, but most builders source their own units locally, especially in the States.

The GTR triangulated spaceframe chassis was delivered. Integral roll-cage is welded to main frame.

Dean's car, however, was to have a few extras above the standard package. Twin fuel tanks, racing rollcage, stainless steel exhaust system, leather interior, and of course, Ultima's own gargantuan wheel and tire package. The end result is a civilized, yet awesome, road car, and a formidable track day machine at weekends.

Delivery of the kit was courtesy of Ultima and this applies to anyone living in the States. Once off-loaded, the sheer volume of components was staggering, 3,000 items, give or take a few, all individually packaged and labeled. The accompanying factory promise was that, if Dean needed any additional components to complete the car, they would be supplied free of charge.



TIG-welded wishbones are mounted on the chassis using urethane bushes. A fully rose-jointed option is available, but for road and most track use the standard setup is formidable.

The build was straightforward thanks to the comprehensive CD build manual and online technical support. Construction of the rolling chassis could not have been easier. The use of Ultima bespoke components soon leaves you in no doubt that some serious racing miles are behind the design. Nice touches included the custom-made quick rack, beautifully TIG-welded pedals, laser-cut aluminum panels, and even the supply of grease sachets for building up the suspension bushes!

Moving on to the bodywork was momentous. Consisting of seven panels, the customer has a choice of paint or gelcoat. Dean's preference was for the latter in signal red. This was partly due to budget constraints but also the flawless finish of the body. He opted for the body finishing option that equates to the removal of all flash lines, cutting of all apertures, and drilling of all hinge points.

Even with this work done, body fit was without a doubt the most demanding part of the build. To obtain perfect shut lines took a little patience. The end result, however, would put most mainstream car manufacturers to shame.

The cooling system is immense. The brass-and-copper-constructed radiator with twin fans sits at the front of the car. The coolant is routed to the Chevy pump situated amidship by pre-formed aluminium tubes and silicon hoses. This standard system has been designed to cool engines producing up to 550 hp.

The rolling chassis offers little challenge to a competent builder. Suspension geometry is set up at this point thanks to the coilover shock-absorbers being replaced by stays. These position the car at final ride height even though engine and bodywork have yet to be fitted.

The bare aluminum interior is equipped with leather-trimmed seats and dash to offer a modicum of comfort. Sabelt full-race harnesses keep the occupants restrained while white-faced gauges update the driver.

Glazing was also a challenge. Bonded in place with sealant there was little room for error. As for the lights and other electrical ancillaries, these simply bolted into pre-drilled holes and connected straight to the supplied loom.

Ultimas are only powered by one engine type, the Chevy 350 and derivations thereof. Customers fit anything, from stock GM units giving 250 hp, up to supercharged beasts delivering 600-plus hp. My route was a sensible 300hp from a stock 350 block, sporting an Edelbrock competition cam, worked heads, and a Holley Street Avenger carburetor on a matching inlet manifold.

To get the small-block in the confines of the chassis, a 7.5-inch race sump and short water pump setup was the order of the day. Bolted to a Porsche G50 gearbox, drive is provided to the rear wheels by dedicated driveshafts. To finish her off, Ultima's custom stainless steel exhaust system was positioned atop the transaxle.

The first panels to be fitted are the sidepods. Using wheels for alignment, these house the fuel tanks and luggage containers. Once in position, sealant, pop rivets, and set screws locate the panel permanently.

The engine sits very low in the chassis, but access is good. Since it contributes to almost a third of the car's weight, it is important to optimize weight distribution.

Build time was around the 1,000-hour mark, but other builders have completed cars in half this time. My fanatical approach to everything explains the additional time invested.

Dean said, "I cannot praise this kit enough. The quality of the components is sensational, assembly is straightforward, and the occasional shortage is replaced within a couple of days."

Ultima's range of cars have been designed specifically to meet amateur build requirements in the States. The differences to the UK specification are as follows:

* Left-hand drive conversion
* Gear-lever positioned centrally
* Headlamps switched to left-hand- side driving
* Reversing lights integrated into rear light system
* Wiper mechanism altered to rest wiper on right-hand side
* Instrument binnacle altered to point towards left-hand-drive position
* Optional high-level brake light (required in some states)
* Optional catalytic converters (required in some states)

Here the car is going through its SVA test. This is the UK procedure for registering a car for road use. After a four-hour inspection, it passes with flying colors and is now nestled in

Dean added, "On the road, this car is simply sensational. Fourth gear

will catapult you from 50 to about 110 mph in an instant. As for standstill to 60 mph, we are talking mid-fours. This is the ultimate beast that drives like a beauty."

Ultima's Ted Marlowe has said that the Ultima is not a racer but a road car, and they have gone to considerable lengths to assure U.S. customers that it can be road registered. Ultima's strategy has been to have all Ultima cars built to the exceptionally high factory specifications it provides. Ultima can and does supply every single part, bracket, nut, bolt, and washer in their assembly kits, though Rosen deviated from the standard with his own upgrades and mods. Ultima provides the standard, a standard that Nigel Dean adhered to, but it is up to the buyer/builder to reach those high benchmarks or seek his own. We hope this look at both cars gives you readers food for your Ultima thoughts. KC

Dean's garage.

Classy, sleek, fast, and done by the book, Nigel Dean's car is ready for the road or the track, at factory specs, done neatly and expertly.

SOURCES

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