

G'day to all of our Aussie Invader LSR Project supporters, sponsors and followers. This past month has been full steam ahead for all of our team, the development of the car is surging ahead and several key areas of this unique vehicle are all happening at the same time.

Media exposure

We have had a huge month with several TV Documentary companies contacting us from Sydney Australia, Canada, The USA and two from the UK. Various magazines, including Debbie Jarvis from Petrolhead magazine in NZ are all looking to write articles on the car..



Our long time supporters, Channel 7 Perth, did a great story this week on our mission and the development of Aussie Invader 5R. This was the best television coverage we have received since setting the Aussie Record. There was a nightly promo ad that aired for a full week and the story they did lasted for about 4 minutes, best of all it was word perfect. Howard Gretton was the interviewer and he did us proud. Thanks also to Shaun Menegola, 7's news boss and Ross McLean Perth's best camera man. A movie of the interview can be seen on the website at:

http://www.aussieinvader.com/video_downloads.php

Help from our sponsors

Our good friends at LF Performance Products are underway with our rollcage, this has been a bit of a challenge for Terry Fielding, every time I have said to him, "that's great let's build it", then I















call him back and say can we just make a slight change?

Go Gear who has helped us out over many years with their vast product range and long time race car experience, have supplied us with our race seat, 6 point harness and seat mounting brackets. All of these components are being fitted into our rollcage as we speak. Special thanks to Dick and Roy.

Aussie Invader 5R overview

Several media companies have asked us for a diagram of the car and a basic explanation of how it works, so Mark Read has produced a brief overview. You might also find it of interest.



1. Nose Cone - composite fabrication. Nose cone used to house batteries and on-board computer equipment.

 Front Wheels - hubless solid front wheels mounted on a common axle.
Hand forged L77 aluminium (up to 850 mph). 1000 mph (composite wheels).

 HTP Tank - containing 2500kg of High Test Peroxide, which mixes with the kerosene derivative JP5 bio-fuel to produce 62,000 pounds of thrust.

 Nitrogen Pressure Tanks (HTP) bank of 3 tanks in front of the driver. Used for blowing the HTP into the four 4 rocket engines. Cockpit - designed to support the driver and minimise the effects of G forces. Also equipped with all instrumentation and breathing air tanks in the event of a fire.

6. Fuel Tank - containing 400 litres of JP5 Bio-fuel (kerosene derivative).

 Tail Fin - carbon fibre vertical stabiliser with an adjustable horizontal fin. Used to help keep the car straight and provide rear end down force.

 Nitrogen Pressure Tanks (Fuel) - bank of 3 tanks behind the driver.Used for blowing the fuel into the four 4 rocket engines, where it will mix with the HTP. 9. Chute Cans x 2 - one 150 ft. stinger stabilizer rope (high speed deployment - 900 mph). One 7ft 6in chute (low speed deployment - 500 mph).

 Rear Wheels - hand forged L77 aluminium (up to 850 mph). 1000 mph (composite wheels) with 400mm carbon rotors and 6 pot calipers.

11. Rocket engines x 4 - hypergolic (self starting) rocket engines . Each engine produces 15,500 pounds of thrust. Capable of accelerating Aussie Invader 5R (8.5 tons) from 0 - 1000 mph in 20 seconds - equivalent to 200,000 hp. Throttling is produced by cutting in an out engines. 4th engine shutdown through measured mile to stop car exceeding wheel safety rating of 1015 mph.

Challenging times

We are facing some challenging times in trying to source hardware needed for our vehicle. Some companies will not work with us because of the fear of failure or possible disaster using their products, and since 9/11 the mere mention of the word ROCKET stops a conversation in its















tracks, especially in the US. We are learning to work around these issues. Safety has always been our highest priority.

Project update

Our cars front axle and suspension has gone through several redesign phases. As mentioned in a previous newsletter. We are not privileged to have the luxury of a trailing wheel setup on this missile, she is crammed full of HTP, JP/5 vessels and N2 banks, and there is not a spare inch anywhere within her mainframe structure.

We have settled on a fork style front axle that is suspended on two tripod frames with some very large rose joints, kindly supplied by our friends at Liebherr Cranes in Sydney. These joints are steering joints from one of their big cranes and are rated at 65 tonnes each, thanks Tony and Michael for finding these for us and for donating them to our project. We knew joints of this size and capacity existed somewhere in the world, we just needed professional help to find them.

Our next major concern with the front axle is will it be strong enough to carry the weight of the car and stay intact through her 1000 mph journey. The first stage of the design, like many things on our car, is to mock it up first. Even a very rough model, can be better than the best drawings. Seeing it in place will often allow a very quick assessment of whether it will work, saving time and a lot of unnecessary effort.

Then you move on to questions like, "Does it have the safety margin needed to cope for the unexpected?", "Is there enough steering angle?" and "Are we in keeping with our goal of KISS?" keep it safe and simple? We think "yes" but we needed some professional input.

That came in the shape of Mark Pivac from **By Design Group** and Lorenzo Mattaboni from **Sprint3D Engineering.** Both of these highly regarded companies are based in Perth Western Australia. Mark and Lorenzo have taken lots of measurements of our mock up and are presently crunching numbers to see if this setup will fly, pardon the pun.

Hopefully they will come up with answers for us very soon and we will be full steam ahead with its manufacture.



Our Technical Manager and webmaster Mark Read and Dan McKeon, our newest team member have been very busy working with our computer animator Mike Annear developing a CAD model of our windshield canopy, we should have some pics to show in our next update, the plan is to















cut the mould for the windscreen and nose from a foam blank using a computerized robot, no more of this bogging and sanding stuff for us. Dan Boseley is extremely happy about this.

Bernard from Frank Soto and Associates in Wollongong NSW, are working away at our CFD modelling and are hopeful of producing their first assessment of our vehicle in a few weeks. These people are regarded as the best in the business and we are blessed to have them as part of the team. Once our car proves to be stable both subsonic and supersonic, we will then commence work on the composite nose, vertical and horizontal stabilizers.

Our rocket motor development needs some help, our good friends at Rocket Lab in Auckland New Zealand need to be pushing forward with the modelling, construction and testing of our motors and rocket hardware, and we are on the sponsorship trail and working very hard to find the funding for this extremely important area.

My team and I are asked on an hourly basis "how long will it be before you will be up and running?" Without the upfront funds this question is unknown, we just have to keep giving this mission our very best shot and that is what we are doing ! "In my world I drive it everyday"

How can you help?

Well, we have produced an A4 sized poster that you can print and put up in a public place that will help raise the profile of Aussie Invader 5R and attract possible sponsors who might want to be involved in this ground breaking project. You can also email it to others you might think will be interested in what we are doing. The poster can be viewed and downloaded at:

http://www.aussieinvader.com/aussie_invader_flyer3.pdf

Thank you to all of the great people who have made donations to our project, in October's newsletter I will ask Mark to attach some pics of the components your donations have help secure and we are working towards having a top spot on our car where we will display all of our supporters names.

All the very best to you and yours...

Rosco

If you wish to be removed from this newsletter, please reply to <u>mark@aussieinvader.com</u> with remove in the subject line.





