

AERO 101

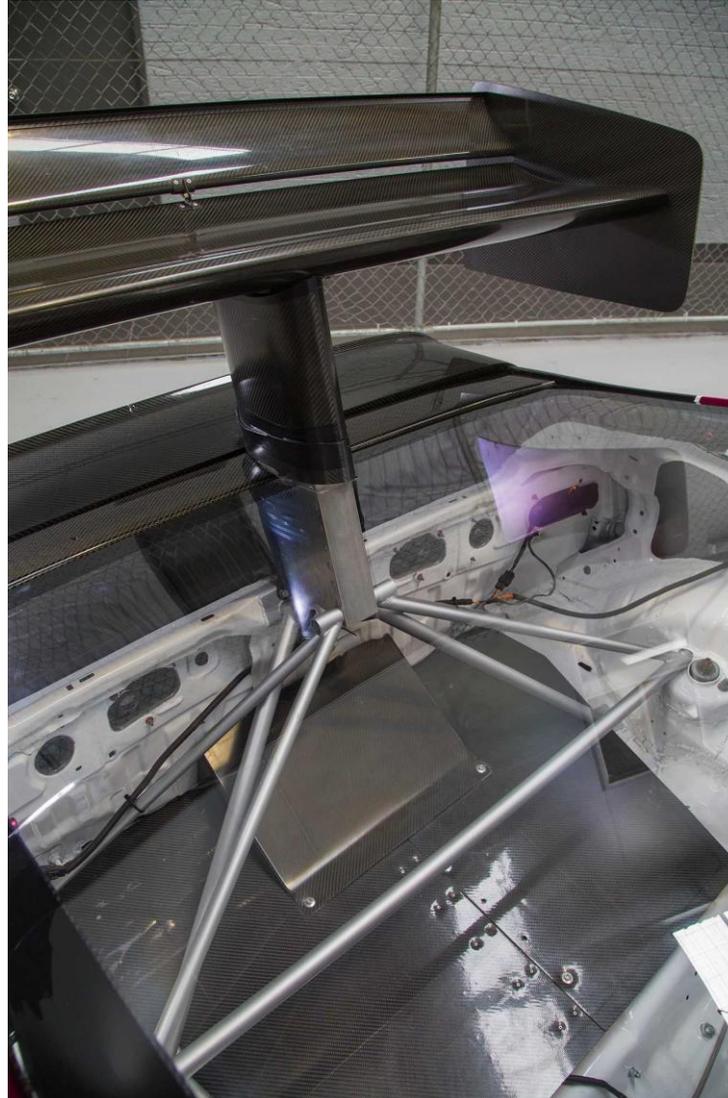
Now that we've covered the Pro Class winners, let's move on to the Pro Am Class. We covered the PMQ Evo before, so it's on to 2nd place to analyze the 101 Motorsport CR-X, dubbed "Mighty Mouse," piloted by Rob Nguyen!



The great thing about Mighty Mouse is that it is a tremendously light car with a lot of power. Coming in at 1750 lbs with 480 bhp, this CR-X flies! Taking a look at the front, we can see a few things. The bumper features an extended lip which functions as a splitter. Molded to the sides of the bumper are small dual element winglets. The bumper only has the middle duct, and features a relatively flat surface for the air to stagnate on. The winglets stick out further than the body, ensuring that the airflow shed off of them does not affect the rest of the airflow on

the car. By using a dual element wing design, they can create the same amount of downforce as a single element wing with the same camber, but with less flow separation. The main element is not adjustable, but it appears the 2nd element has 2 set angles. The 2nd element also features a gurney flap, which increases the pressure on the top side of the wing to help make more downforce.

The footplate on the winglet endplates creates vortices that don't really seem needed here, based on how far the winglets stick out. The bumper duct feeds air directly into the intercooler and radiator, which are stacked one behind the other. The airflow exiting these cooling matrices is dumped into the engine bay. There seems to be enough room to fit an exit duct, so it seems odd that 101 Motorsports and Rob didn't go this route. Instead, the hood features some tall hood vents, which seem to be an afterthought. The vent's vanes stick up almost vertically, instead of slightly angled which would help air exit better. Moving along, the fenders are vented much like every time attack car now. Air exiting the fenders moves over the side splitters and is guided by a turning vane. The rear tires are blocked from air hitting them directly, to reduce tire drag. Since this is a small car, there's not much else going on around the sides, so we'll move onto the rear.



The rear wing for this car is quite unique. It has a single pylon mounted to the bottom of the main element. The pylon is teardrop shaped, which makes it very aerodynamic. Inside the pylon is a very thick wing mount, extends into the hatch and is mounted to the shock towers and rear trunk area. The trunk tub has been cut out, to allow for the exhaust to be routed up higher above the diffuser. The rear wing seems to have the same profile as the front winglets, only bigger. Interestingly, the mount holding the main element and 2nd element is incredibly small and spans just the gap. The wing endplates are moderately sized, which

indicates that 101 Motorsport has found the amount of aero balance they are looking for.



Finally, we'll talk about the diffuser. The diffuser is simple, only featuring 3 channels. The middle channel is raised higher than the outside ones, although they all appear to start in the same place. The main reason for this is that the middle of the diffuser is exhaust driven, meaning they can increase the angle to try and reduce lift even more without worrying too much about flow separation. The exhaust flow energizes the airflow in the diffuser section indirectly. Exhaust gasses have a higher pressure due to their temperature, which increases the pressure difference on the top versus in the diffuser. The greater the pressure differential, the greater the downforce. Rob says Mighty Mouse isn't done yet, so we're interested to see what else they'll come up with!

Pictures courtesy of Super Street.