



AUTECH TSUKADA BNR34 GT-R



TOP SECRET V35 GT-R

# THE REAL JDM

## Legal Speed



The Real JDM is a monthly column written by Ben Schaffer of Bespoke Ventures. Bespoke Ventures operates a number of JDM related businesses including: Bulletproof Automotive, Top Secret III, Ings+1 USA, VARIS USA, HyperRev USA and C's USA. Visit [www.bespokeventures.com](http://www.bespokeventures.com) for more information.

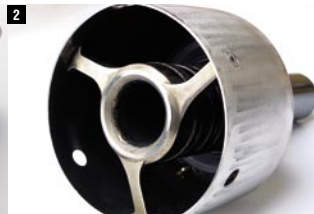
BY BEN SCHAFER

**OK, LET'S POINT** out the obvious, you are a reader of Modified Magazine. You read each month eager to see what the hottest new rides are and you check out each car's spec list to see what the latest and greatest parts are. When viewing the spec lists, when was the last time you noticed a catalytic converter mentioned? Odds are you've either never seen one in the list, or you did and it wasn't impressive enough for you to remember.

In North America emissions output of our tuned cars is typically not an appealing subject. Installing parts like a high-flow catalyst simply isn't a sexy modification to do. While installing a straight pipe is often considered "hardcore", installing a high quality JDM catalyst is unlikely to impress anyone besides possibly Prius owners. Yet in Japan many hardcore cars don't use straight pipes. Between the joint appeal of technology and performance you'd be more likely to impress someone with a high quality catalyst than you would with the antiquated straight pipe solution.

Many people Stateside would be surprised to find that some of their favorite JDM-tuned cars are street legal. Whether it be D1 drift machines, some of the fastest time attack cars or Wangan destroyers like Top Secret's latest V35 Skyline Coupe (G35) GT-R widebody, some of Japan's fastest can be actually driven legally on the street.

Over the past five years there has been a growing business in Japan for green power. In particular performance metal catalytic con-



1. EXPENSIVE COMPETITION GRADE HIGH-FLO CAT FOUND ON TIME ATTACK CARS.
2. THE A'PEX ACTIVE TAIL SILENCER

verters and more quiet exhausts have become increasingly popular amongst tuners. High flow catalyzers have found a following amongst the majority of the tuners in Japan and find their way into everything from mild to wild tuned cars. Some catalyzers in particular can become quite exclusive and pricey, fetching up to \$2000 as they utilize precious metals including platinum to extract the most power per hydrocarbon.

Illustrating the importance of legal power, one of Japan's top magazines has even changed their layout of how they display specs of time attack cars. Each month RevSpeed Magazine in Japan covers what they call the T1GP, a time attack series on Tsukuba Circuit. In each issue they typically display photos, specs and lap times of the top contenders. What is notable is that right next to the usual vital statistics such as power and weight there are new stats including HC ppm and CO %. For example next to the Autech Tsukada BNR34 GT-R you'd see that it has 621 HP, weighs 3117 lbs, produces 0 Hydro Carbon parts per million and has 0% carbon monoxide rating.

Essentially what this all means is that cars like the Autech Tsukada which can lap Tsukuba Circuit in 58.65 seconds would also pass California's stringent emissions output requirements

which require a HC of under 140 ppm and CO of less than 1.0%. With California's emissions regarded as some of the toughest in the world, having a "race car" pass with flying colors is quite an impressive feat.

Due to the capabilities of the latest high flow catalyzers that allow sub one-minute lap times to be accomplished within legal regulations, the market for high flow cats has become big business in Japan. One of the leaders is the A'PEX super catalyzer which uses a 130 cell per square inch metal honeycomb core. The fewer the cells per square inch, the better exhaust flow and the more power it will gain. For reference, stock cats generally range between 400-600 cpsi. The high cell count stock cats restrict power in comparison to a good aftermarket unit and in the case of high boost turbo vehicles, power losses with the stock cat(s) are tremendous, seriously stifling boost pressure and peak power.

When browsing through Japanese magazines you'll probably also notice a large number of exhausts being sold with names that include words like "silent" or "legal". Also popular amongst exhaust applications is the use of variable silencers. A variable exhaust provides less noise at lower RPMs and then opens freely at

high RPM to allow for the same dual natured use that has made variable valve timing like VTEC so popular. Some exhaust systems like Fujitsubo's "Viable" exhaust even come with interior electronics to adjust restriction/sound from inside the cabin. There are universal applications as well, including the A'PEX Active Tail Silencer which is inserted into the exhaust tip and provides spring loaded resistance to restrict noise when not under throttle.

Tuners in Japan have been putting a great effort into extracting power silently, both to meet decibel regulations and also to speed silently so that they don't receive unwanted attention by the authorities. Top Secret's Smoky Nagata is perhaps the poster boy for receiving too much attention from the authority, as he's been legendarily captured on video by the police for his particular driving habits. However Top Secret has become friendlier to the law and now utilizes some impressive tactics to build their wild demo cars, legally.

Remarkably the Top Secret V35 GT-R (G35) widebody demo remains street legal in Japan, in part because it utilizes a VK45 V8 twin turbo engine and on the fly ride height adjustable coilovers, co-produced with Roberuta. To maintain his ability to still cruise the Wangan with his latest toy, Smoky registered the V8 swap and has

the government paperwork to back up its legality. Japan has a minimum ride height requirement of 90mm road clearance (3.5-inches) which is where the Roberuta height adjustability comes into play. Top Secret's car can drive at heights below the legal limit and when necessary it can immediately be raised up to comply with the law, making a fool of anyone who questions its ride height legality. Although it was possible to build the car and have it registered legally, keeping the car within legal speed limits is a challenge perhaps even more difficult.

Keeping with their new interest in legal performance tuning, Top Secret has also dropped their entire old exhaust lineup and released a new lineup of JASMA (Japan Automotive Sports Muffler Association) compliant titanium exhausts. While the piping diameter is often smaller for the JASMA complaint versions, decibel levels are reduced to within the JASMA allowed legal limit and significant power is still gained, as their Y pipe back Z33 Fairlady Z (350Z) exhaust gains 10.5 HP at the rear wheels.

Many race organizations in Japan are requiring the use of catalyts to compete, ranging from time attack to drifting. Although D1 Grand Prix competition vehicles look as though they are far from legal, they all are required to use catalyts and some of them see street use. D1

has always had an interest in keeping their cars based on street driven vehicles, allowing the fans to have the same opportunity to build their own cars and hopefully one day compete with the pros.

Depending on where you live, emissions laws and police enforcement can range from relaxed to severely uptight, however everywhere to some extent authorities are cracking down on import sports cars. The pressure from authorities is something that is shared whether in Japan or stateside and many of Japan's top companies have been working hard to produce high performing solutions that allow all of us to enjoy our cars while carefully dodging the law and its increasing number of traps that pose a threat to the enjoyment of our cars and our hobby. Whether it's high flow cats to get more power legally, active exhaust systems that can fool decibel meters or suspension that adjusts on the fly to legal ride height, there are more ways than ever to keep "the man's" hands off of our cars and our check books.

Look for next month's The Real JDM as Ben brings more cutting-edge industry insider knowledge from Japan to Modified's pages.

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