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**MODIFIED
MINI
MADNESS**



**Summernats 17
Cars of CES 2004
Motorvation Madness
Tuned SPL Commodore
Holden Crewman Cross 8
Custom Mazda Tran-Sport
Impressive Kenwood Ignis
Magnificent Clarion Magna**

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Mini MAX



Alpine has pulled out all the stops and transformed a new MINI into one of the world's most extreme audiovisual installations.

Story and Images: Richard Truesdell



STEVE BROWN AND MIKE VU OF ALPINE NORTH AMERICA have pushed the envelope taking installation techniques and technology to the edge, with unprecedented attention to each and every detail of the latest Alpine US demo car. Regular *InCar* readers would have at least been prepared for the extreme new MINI—transformed from a mild-mannered econobox to an ultra-wild show car—with the preview that appeared in our previous issue (Jan/Feb 2004, pages 8–9).

Unveiled to almost universal acclaim at the 2004 Consumer Electronics Show in Las Vegas, it clearly illustrates what happens when unbridled creativity is nurtured by one of the world's most forward-thinking mobile electronics companies. While this car will be profiled in countless consumer electronics and automotive magazines around the world, you're seeing it first here 'downunder' in *Australian InCar Entertainment* magazine.

Planning

This story starts out in January 2003 when Alpine's Senior Advanced Application R&D Engineer, Steve Brown, had to figure out a way to top the company's recently unveiled Honda Civic Si, which featured a rather novel custom centre-steering modification.

"We knew that we wanted to take our next installation to another level entirely," said the ace installation guru. "We wanted to bring all aspects of our next show car in-house and this time we would include all the body modifications and the paint. About the only thing we would farm out would be the air-brushed artwork by Noah, which has become something of a trademark of our most recent installations."

Brown's efforts were complicated by the departure of long-time collaborator, Chris Yato. This meant that he would not only have to plan Alpine's next extreme installation, but bring it to

fruition with someone new. This is where Mike Vu enters the story and things get really interesting.

Vu is well known in the Southern California installation community, having created quite a reputation for building up super show cars while at Al and Ed's, a chain of ICE specialty stores. Through the grapevine he had heard that Yato was leaving and that there would be an opening at Alpine. Vu is no different to most other installers toiling away in an installation bay. He knew that a gig at Alpine would be a career-altering move, given the high reputation the manufacturers' products enjoys. And more importantly, supporting some of the most innovative and creative installations on the planet.

Last Spring, after monitoring the employment page on Alpine's US Website, Vu decided it was time to drop off his resume at Alpine's Torrance, California, headquarters. Even though it was his day off, Steve Brown was catching up on some projects in the installation bay when Vu introduced himself. To put it mildly, Brown basically brushed him aside and went on to other things. Vu turned in his resume and hoped for the best.

It wasn't until Brown realised that he had seen and admired some of Vu's work that he realised the answer to his prayers had virtually fallen right into his lap.

"Yeah, it was a funny story about how Mike came by on my off day. I did kind of blow him off (err...brush him, Ed), until he told me that he built the Toyota Matrix. I was very impressed with the detail in that car, and we talked for a couple of hours after that. The thing is, we get approached constantly by people who want a job at Alpine, so I had no way of knowing if Mike was a poseur or the real deal. Needless to say, Mike is the real deal. Immediately after meeting Mike, I told my boss that this is the man for the job. After building the MINI with him, I know I made the right decision."



Patience

Not too long after Mike's addition to the team in July 2003, *InCar* got an exclusive sneak peek at the new MINI, at the point in construction where Brown and Vu had chopped its top. Brown relates what was involved in the new MINI's signature feature, its radical motorised seat/subwoofer enclosure.

"I had the initial idea for the general concept of the car—the removal of the roof, welding the doors shut, and motorising the seat out the back—at CES 2003," says Brown. "I was walking around looking at gull wing doors, scissor doors, suicide doors, and I thought it would be cool to do no doors. So, with that decided, we had to find a car. As it turned out, MINI of North America saw the Civic at last year's CES and approached us about building a MINI to the same level or higher. So, they gave us the car, and by the time we actually received it, it was May. Mike started in June, and we proceeded to chop the top and make the mould for the windshield.

"The seat had to be done first, since everything inside revolved around this basic concept. It was done around July, and then we got the body kit and started the exterior construction. While Mike worked on moulding the kit, I worked on the interior fabrication, and of course we helped each other out from time to time as the process went on. By November, all the fabrication was done, and then we started the priming and painting process. The car went out to Noah for airbrushing at the beginning of

December, after we had painted everything silver, clear-coated everything, and re-assembled the car so that the lines would match up. Then, when we got the car back, we disassembled the car, clear-coated everything two more times, colour-sanded and buffed everything, then started assembling and wiring the car for the last time."

The integration of the bodywork to the new MINI is something that both Brown and Vu are equally proud of. After carefully marking the cut points of the roof, then taking to it with a sawzall and an air saw, Brown noted that the hardest part of the process was making the new MINI look like a car again. They desired a wide, mean look, at least four inches wider on each side, but no suitable body kits were available in the US. Brown and Vu wandered onto the Internet where they found exactly what they needed, a kit made by Konig Seder in Austria. Next they tracked down a distributor in Canada to get them the first kit in North America. After it arrived they noted that the fit, since it was such an early example, left something to be desired.

"Since we were going to mould the kit into the body anyway, it wasn't the end of the world," says Brown. But it did create a lot more work. The kit was moulded into the body and they incorporated a lot of custom touches, such as the moulded and illuminated plexiglass Alpine logos on each side of the car, and the Nitrous Express nitrous bottles moulded into the bottom corners of the kit.

They also modified the front bar by making a custom 1/2-inch

aluminum lip to replace the fibreglass one that came with the kit. After all of the moulding was done, they took the car to a rented paint booth to polyester prime it. The whole car was sanded with 150-grit, and returned to the booth for the filler and primer. (It was during one of these trips to the paint booth that another installer, working at a competitor, snapped a few photos of the car on its transporter, not knowing what he was snapping. It wasn't until CES that he figured it out.)

The car was wet-sanded with 400-grit, then base-coated silver, clear coated, scuffed, airbrushed, clear coated two more times, sanded with 2000-grit, and buffed. The whole process took at least six weeks just for the exterior of the car. Brown and Vu did everything themselves, except the actual airbrushing, because they knew they couldn't afford the time to let the car sit at a body shop for months.

Perserverance

It was interesting to note the reaction of industry observers who saw the new MINI at CES. Reaction fell into two distinct camps: you either loved it or hated it, there seemed to be no middle ground. Those who loved it were simply blown away by the sheer audacity of the effort. Those who hated it felt that it was derivative of previous efforts, especially the exterior color selection and the airbrushed artwork by Noah. Vu can shed some light on the selection of the colours used in the finished car.

"Since Alpine's core colors are blue and silver, we started with Arctic Silver basecoat (BMW silver) and applied two coats of Tip Top Auto Technologies clear, provided to us by Coast Airbrush. With two coats of clear on the car it was then scuffed with a very fine Scotch Brite pad so the airbrush graphics would adhere. With the Mini painted, it was then sent to Noah for airbrushing. We chose silver because we did not want the car to be as dark as the Civic Si. We wanted Noah to work on the color we chose so he could accentuate the body kit, giving the lines of the body some

contrast between Alpine's two colors. Then another two coats of clear were applied over the artwork, colour sanded with 2000-grit and buffed to a mirror like finish."

The result is far different to the vinyl graphics typically found on most factory demo vehicles. Style is a matter of taste but it's hard not to love the way the graphics work together and the overall flow of the MINI's newfound curves, especially after the roof was removed.

Looking back at past Alpine democars, in particular the RSX and Civic Si, people have always been struck by the wild way the gauges have been integrated into the overall design. This year Alpine went in a different direction, as Vu explains:

"I was approached by EDO Performance and was asked if we would take some time to meet with them and check some of the new gauges they carried from Defi, and we agreed. After seeing the gauges in action we knew automatically that these were the perfect gauges for the Mini. We also had the gauges modified in 'demo' mode so they would not just sit there and do nothing, but rather displayed in action. From our perspective, the gauges have an Alpine 'look' that really integrates into the front panel design of the Alpine source components."

Product

Speaking of components, the actual system layout wasn't completed without its own minor complications. For most of the installation process Brown and Vu were working just with drawings and prototypes, not actual products. Brown noted that they did not receive the final subwoofers until the Friday after Christmas. Since the primary reason for building a show car such as this is to showcase the newest products, this really complicated matters. Brown and Vu were putting the final touches on the car, while we were shooting on Saturday, January 3, right up until the car was loaded on the transporter for CES at 2pm.

For 2004, Alpine's emphasis was to create the ultimate AV





showcase. With the installation of its now trademark centre-steering layout, a completely new dashboard had to be fabricated. A total of six TME-M580 5.8-inch monitors are held on intersecting fibreglass 'arms' and are positioned on the left and right side of the steering wheel, dominating the cockpit. The steering wheel is a totally custom unit with has a Defi digital readout installed into its centre hub. The six monitors display images from a variety of sources, including an NVE-N852A PowerNAV DVD navigation system, Microsoft Xbox video game console, DVA-5210 DVD player, and a DHA-5680 six-disc DVD changer.

The fibreglass component cluster that surrounds the steering wheel houses a CDA-9835 AM/FM/CD/MP3/WMA/XM-ready head-unit and the DVA-5210. The CDA-9835, like most 2004 Alpine source units, will accept a direct interface with an Apple iPod music player, offering full control through the head unit's front panel, with track selection visible on the display. This announcement was a major ICE highlight of this year's CES and the interface is expected to be available in the third quarter of 2004.

A PXA-H701 digital processor supplies Dolby Digital, Dolby ProLogic II, and DTS signal processing and its faceplate, the RUX-C701, provides readouts of the processor's settings and is placed on top of the steering column. The six Defi driving gauges are housed in custom fabricated fibreglass cylinders with chrome accents, located on the left and right of the steering column flanking the fully integrated centre channel speaker, an SPX-137R 5.25-inch component two-way.

Six amplifiers provide the system's horsepower. Two MRV-F540 four-channel amps and two MRD-M501 AccuClass-D mono amps are installed on the floor of the new MINI. These four amps become visible when the seat/subwoofer enclosure/sled is fully extended. Two MRD-M1001 AccuClass-D mono amps are installed on the interior sides of the car and flank the sides of the sled.

Besides the centre channel, two additional SPX-137R 5.25-inch component two-way speaker sets are placed to provide the left and right front stage, with two more sets installed to the rear, perfectly positioned for when the sled is in its most forward position.

Mid bass is provided by four sets of SPX-17MB 6.5-inch mid bass drivers located on either side of the driver. For maximum impact, two SWX-1242D 12-inch subwoofers are attached to the back of the driver's seat on the sled. Finally, a TME-M770 6.5-inch widescreen monitor is flush mounted into what was once the new MINI's rear deck lid, which like the monitors up front, can display video output from the DVA-5210, NVE-N852A navigation system, or the Xbox console which features MadCatz wireless controllers. Monster Cable provided all the high quality wiring, cables and terminals.


Additional exterior flash is provided by backlit Alpine logos found on the front bumper, side skirts, and external rear of the sled. Like the last two Alpine CES cars, airbrush artist Noah was commissioned to perform a one-off treatment that flows from the exterior panels to all of the interior surfaces of the car, using paint and clear coat from Coast Airbrush and Tip Top Auto Technologies. Toyo tires are shod onto the custom 20-inch O.Z Racing Wheels, while a Nitrous Express kit is installed on each of the side skirts.

Presentation

Brown and Vu estimate that more than 4000 man hours went in to the installation, including the bodywork and paint over a seven-month period. At an industry-standard rate of \$US50/hour for labour, this works out to around \$US200 000 for just the labour alone. It also indicates the amount of overtime that Brown and Vu put in to complete the project in time for its debut at CES.

Each year at CES we in the media try to figure out how Alpine, as well as other manufacturers, can top the previous year's effort, and the following year they inevitably do. Other than building a car from scratch, we just can't see what they can do to top this effort, but Vu put this into its proper perspective.

"There are so many ideas that never made the MINI project because of time restrictions and the overall size of the vehicle. There are probably enough ideas to complete another demo vehicle. In other words, in our minds, we have already topped this project."

Other than building a one-off concept vehicle for a major vehicle manufacturer, something that we're confident they can do, I can't even begin to imagine what they have up their sleeves for CES 2005. 

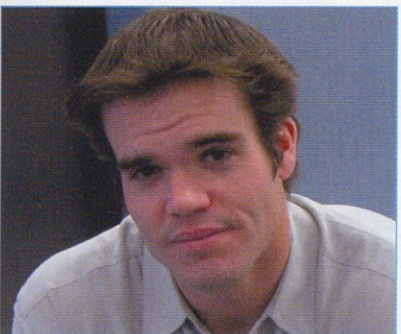


profile

Mike Vu

Mike Vu, 28, of Garden Grove, CA was voted one of the US's top 12 installers in 2002 by Mobile Electronics Magazine. In his on the Mobile Electronics Website (www.me-mag.com/Top12_Installers/T_mikevu.cfm) bio he credits Brown, Yato, Dave "Fishman" Rivera and Bryan Schmitt, formerly of Rockford Fosgate, as his past influences. This is somewhat ironic as he has replaced Yato and is teamed with Brown. On his own since 17, and with an art (as well as welding) background, Vu made valuable contributions to the new MINI concept.

In looking back on the New MINI project Vu notes, "One thing I would like to add was that people find it hard to believe that everything that was done to the MINI was done by us. The only thing we out sourced was the artwork by Noah. This is something we take a lot of pride in."



profile

Steve Brown

Steve Brown, 31, of Manhattan Beach, CA grew up in Washington State and credits his father; one of the Pacific Northwest's most respected hot rod builders, as being one of his primary influences. With an engineering background and more than 10 years industry experience at all levels, Brown has been responsible more than his share of award winning installations.

Brown has this to say about working on the design and construction of Alpine's 2004 New MINI. "I think that we're most proud of the fact that we were able to conceal all of the mechanical elements of the sled and that even when fully extended, it could support a 250-pound load, no problem. With the bar is so high these days, it takes both concept and execution to make a truly impressive final product."

INFO:

- ▶ **Owner:** Alpine USA
- Vehicle:** 2003 New Mini Cooper S
- Modifications:** Two Nitrous Express nitrous oxide kits
- Brakes:** Brembo cross-drilled rotors and high performance calipers
- Wheels:** 20-inch O.Z Racing Wheels
- Tyres:** Toyo Proxes T1-S 245/35ZR20
- Bodywork:** Konig Seder wide body kit, Hamann gas gap, custom moulded, roof removed, doors welded shut, motorised rear door and sled, custom airbrushing
- Interior:** Defi gauges, custom centre seat

- ▶ **SYSTEM**
- Audio Source:** Alpine CDA-9835 AM/FM/CD/MP3/WMA/XM-ready head-unit
- Video Source:** Alpine DVA-5210 DVD player
- Changer:** Alpine DHA-S680 6-disc DVD changer
- Processor:** Alpine PXA-H701 digital processor
- Navigation:** Alpine NVE-N852A PowerNAV DVD navigation system
- Front Video:** Six Alpine TME-M580 5.8-inch monitors
- Rear Video:** 1 Alpine TME-M770 6.5-inch widescreen monitor
- Console:** Microsoft Xbox video game console
- Sound Stage:** Five sets Alpine SPX-137R 5.25-inch component 2-way; Four sets Alpine SPX-17MB 6.5-inch mid bass drivers
- Subwoofers:** Two Alpine SWX-1242D 12-inch subwoofers
- Speaker Amplifiers:** Two Alpine MRV-F540 four-channel amps; Two Alpine MRD-M501 AccuClass-D mono amps
- Subwoofer Amplifiers:** Two Alpine MRD-M1001 AccuClass-D mono amps
- Wiring:** Monster Cable RCA interconnects, power, ground and speaker wire, and terminals
- Installed By:** Steven Brown and Mike Vu
- Credits:** MINI of North America, EDO Performance, Coast Airbrush and Tip Top Auto Technologies, Noah the airbrush guru

