



## FEATURE CAR



# QUART'S CRYSTAL

**J**oseph Loomis has seen it all, at least as far as mobile electronics is concerned, and he hasn't quite reached his 30th birthday yet. After a stint in the US Navy from 1994 to 2000, where he got a serious education in both electronics and computers (Navy Advanced Electronics), he's moved up right into the engineering side of electronics with a number of strategic positions at MA Audio and Rockford Fosgate. It was during his time at Rockford Corporation that he hooked up with Brian Sherman, MB Quart's Brand Marketing Manager

and, together, they created one sweet 2001 BMW M3.

A pre-production model virtually hand-built in January 2001 (regular M3 production ramped up in March, 2001 according to Loomis), this M3 combines stunning German craftsmanship with good old American high-tech know-how. It was one of the first cars to fully incorporate Rockford's revolutionary Omnifi music player, in a system that incorporates a WiFi interface to get song files from Joe's PC into the car's hard disk drive-based server.

### The Enforcer

Loomis departed Rockford Fosgate in the Spring of 2004 to concentrate on his own venture, Net Enforcers Inc, an intellectual property management company that has developed proprietary systems and software to monitor online auctions at places like eBay and Yahoo!, for unauthorised use of trademarks, as well as to police retailers who try to circumvent manufacturer policies with regard to the sale of product over the Internet. This is a problem that plagues

## Story and Images: Richard Truesdell



both manufacturers and retailers of some of the best-known mobile electronics brands. Net Enforcers helps manufacturers monitor the sale of its products online and works to shut down sites that are not authorised to sell certain products.

(Net Enforcers has no effect on individuals who use online outlets to sell components they no longer want or need. Their goal is to catch 'trans-shippers' and 'grey marketers' who devalue the brands of manufacturers and dealers that work hard to maintain their all-important brand image in the marketplace.)

We asked Loomis, whose white hot MA Audio-sponsored 2002 Ford F-150 four-door pickup showcased Clif Design product that he developed while at MA Audio (IC#57, November/December 2002, pages 35-39), to outline the goals behind the design of this particular system, which started early in 2003 while he was still at MA Audio.

"I didn't want anything ridiculous anymore," says Loomis over a tall brew sitting down with me at the Hooters by the Arizona State University campus in downtown Tempe, Arizona where he

now makes his home. "I was tired of the upkeep and hassle of highly detailed and fragile sound systems. I wanted a system that was high quality but I didn't have to worry about not being able to use the car for what it was intended for.

The easy part was replacing all the interior speakers with the MB Quart separates – all were drop-in replacements for the 'premium' speakers that came factory installed – with QSD216 components up front and a set of RCE216s in the rear. The subwoofers are from the MB Quart premium series, a pair



of PWE254s on each side of the boot compartment.

### M Punch

"As for the amplifiers it was my plan from the start to mount them in the floor of the trunk, since the M3 doesn't come with a spare tire anyway. I thought it made sense to just 'flush the amps into the' floor, in this case a four-channel 250 watt MB Quart Q Series QAA4250 amplifier for the four high-pass sets of separates, along with a QAA1000 1000 watt mono bloc Q Series amplifier for the pair of subwoofers. This gave me almost the same amount of trunk space as before the install. The enclosures were custom moulded into the sides of the trunk, easily enough to not get in the way of anything

that needed to be put in the trunk. It's elegant in its simplicity.

"The install was completed in early May at Sound Xpression in Tempe, Arizona. While they did the bulk of the installation, especially amp rack and the very cool subwoofer enclosures, I was responsible for the interior speaker upgrades and interfacing the Omnifi unit into the factory BMW radio's CD changer input. The controller for the Omnifi unit is logically mounted in the centre stack below the factory radio and accessed by selecting the CD changer input on the factory BMW Business CD receiver. While at Rockford, I worked on the Omnifi product team, in fact made several trips to the Far East as Rockford Fosgate ramped up production. It's really a slick product



that takes a bit of understanding to maximise all of the benefits. The software interface has been dramatically improved from where they started from."

### Wireless World

While the system is stealthy in the extreme, beyond the Omnifi system, it bristles with high technology, especially where the all-new MB Quart amplifiers are concerned. "The amplifier board assemblies are arranged one above the other," relates Loomis, downing his second tall brew, staring at the Hooters girls as they pass by.

"Their power supply is insulated from the end stage. The analog operating elements are installed at the top and combined with a digital display. All connections are located on the left side of the amplifier. And finally, a unique bypass mode ensures maximum amplifier performance and high loading. A proprietary circuit simplifies the signal path of the amplifier, allowing the signal to travel through the amplifier at a low voltage. This results in greater reliability, cleaner performance and exceptional musicality with the speed, durability and power of MOSFETs."

It probably also contributes to the relatively massive size of the amplifiers with regard to their rated output. When the amplifiers were formally introduced at CES this past January, almost everyone, yours truly included, commented to



MB Quart on their size. When I visited Germany in the Spring and attended the Sinsheim Car + Sound Show I was shocked at the buzz surrounding them in Europe. It seemed that everyone at the show was talking about them and the Alfa Romeo sports coupe that shared booth space with the Rockford Fosgate model decked out in nothing more than body paint. This might have contributed to the buzz as well...who knows?

Unlike so many demo cars, this one is no trailer queen nor is it all show and no go. "The car gets constantly upgraded with performance parts to make it faster," says Loomis. "So far, my fastest 1/4 mile time is a 13.06. With someone who knows what they're doing, right around 12.30 is what it should do."

## M Power

The car benefits from the following upgrades courtesy of Evosport in Huntington Beach, California. Performance started with an AFE Cold Air intake coupled with a Ground Control Intake Gizmo and custom Powerchip/ Evosport performance software to increase the fuel and air capabilities. Bosch Iridium spark plugs burn fuel and air with a hotter more consistent spark. Evosport also outfitted the M with their own under drive pulleys for producing more horsepower while increasing

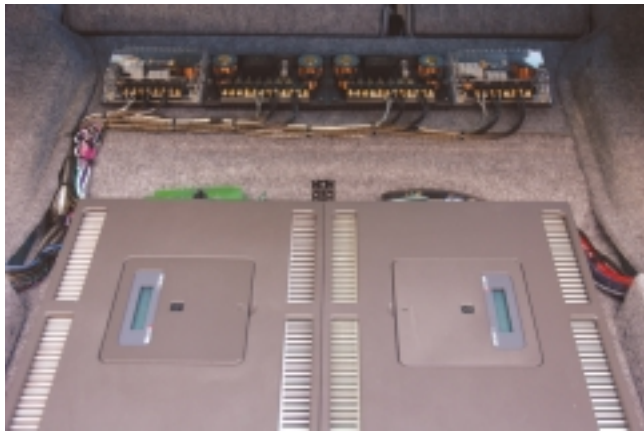
alternator output current for the sound system demands.

The exhaust is upgraded from the manifold to the tip of the tail pipe. SuperSprint North America supplied their top-of-the-line BMW high performance headers, race catalytic converters, mid pipe and race exhaust. This increased output by 27 horsepower and 35-foot pounds of torque. Because of the power increases, the OEM drivetrain was also upgraded with a UUC light-weight flywheel and high performance clutch installed by Superior Race Development in Tempe, Arizona. Evosport's Brad Otoupalik also recommended upgrading the OEM brakes to the Euro Cross Drilled Rotors

along with some nice low Dust Hawk HPS brake pads.

Otoupalik installed a special H&R/ Evo RSS Street coil-over suspension accompanied by the Ground Control rear shock mounting kit. This special suspension was built to Evosport's specs through a partnership with H&R Special Springs. The stock sway bars were tossed in the dumpster, replaced by a set of H&R high performance front and rear sway bars. Rolling stock finishes the upgrade with a beautiful set of HRE 546R gunmetal centered, high-polished rims (19 x 8.5 front, 19 x 10 rear) wrapped in a full set of Falken GRB FK-451 Euro sports tyres (245/ 35ZR19 front, 275/30ZR19 rear) mounted





and balanced by Arizona's premier high-end wheel and tyre dealer, Wheel Specialists.

### Holding Quart

To stiffen the body of the M3, Strong-Strut front and rear strut braces were installed. Increasing illumination was taken care of by an Umnitza DDE Lightning angel eye kit, and Hamann fog light inserts and eyelids dress up the eyes of the Bimmer.

On the inside, AC Schnitzer's complete interior upgrade includes new pedals, a short shift knob, E-Brake and seat belt pads. Shifting was made accurate and smooth via the Auto Solutions Ultimate



**Owner:** Joesph Loomis

**Vehicle:** 2001 (E46) BMW M3

**Engine:** 3.2-litre (3246cc) 24-valve in-line 6-cylinder

**Drivetrain:** UUC Motorwerks lightweight flywheel, UUC Motorwerks racing clutch, Evosport 3.9:1 differential, Auto Solutions short shift kit

**Modifications:** AFE cold air intake, Ground Control Gizmo intake, Evosport Powerchip, Bosch Iridium spark plugs, Evosport pulleys, SuperSprint maifold and racing exhaust system

**Suspension:** H&R suspension with evo/RSS adjustable coilovers, H&R front and rear anti-swaybars, Ground Control rear shock mount kits. Strong front and rear strut braces

**Brakes:** Euro floating cross drilled rotors, Dust Hawk HPS brake pads

**Wheels:** HRE 546R racing wheels - front 19 x 8-inches, rear - 19 x 10-inches

**Tyres:** Falken GRB FF451 front - 245/35ZR19, rear - 275/30ZR19

**Bodywork:** Evosport colour coded front reflectors, Hamann fog light insert air scoops, Hamann headlight eye lids, Master Designs Artwork custom graphics

**Interior:** AC Schnitzer accessories including racing pedals and footrest, short shift knob, park brake lever and seat belt pads



### SYSTEM

**Audio Source:** Rockford Fosgate RF DMP1 Omnifi MP3/CD receiver

**Front Speakers:** MB Quart Premium QSD216 6.5-inch two-way component speakers

**Rear Speakers:** MB Quart Premium RCE216 6.5-inch Alpine two-way coaxial speakers

**Subwoofers:** 2 x MB Quart Premium PWE254 10-inch subwoofers

**Front Amplifier:** MB Quart Q Series QAA4250 four-channel


**Subwoofer Amplifier:** MB Quart Q Series QAA1000 1000 watt monobloc

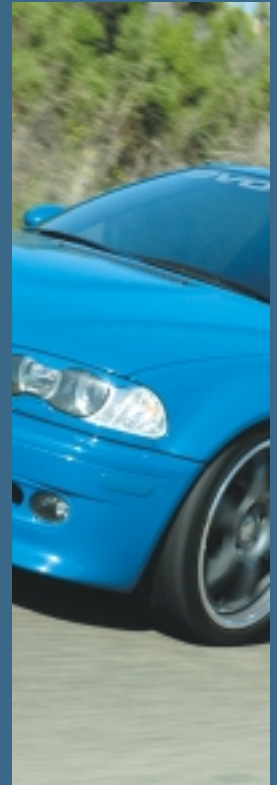
**Installed By:** Sound Xpression in Tempe, AZ

**Credits:** John Walsh, Senior VP at HRE Wheels, Leslie Heine at Falken Tyres, Brad Otoupalik at Evosport, Wheel Specialists

**Links:** [www.mbquart.com](http://www.mbquart.com); [www.omnifimedia.com](http://www.omnifimedia.com); [www.evosport.com](http://www.evosport.com); [www.hrsprings.com](http://www.hrsprings.com); [www.supersprintna.com](http://www.supersprintna.com); [www.powerchipgroup.com](http://www.powerchipgroup.com); [www.afefilter.com](http://www.afefilter.com); [www.uucmotorwerks.com](http://www.uucmotorwerks.com); [www.autosolutions.net](http://www.autosolutions.net); [www.groundcontrol.com](http://www.groundcontrol.com); [www.strongstrut.com](http://www.strongstrut.com); [www.acschnitzer.com](http://www.acschnitzer.com); [www.umnitza.com](http://www.umnitza.com); [www.hrewheels.com](http://www.hrewheels.com); [www.falkentire.com](http://www.falkentire.com); [www.superiorracing.com](http://www.superiorracing.com); [www.wheelspecialists.com](http://www.wheelspecialists.com); [www.soundxpression.com](http://www.soundxpression.com); [www.hooters.com](http://www.hooters.com)

Short Shift Kit. The Interior was upgraded with a Silver Titanium carbon-fibre interior trim kit, also provided by Evosport Tuning.

Joe wishes to thank all the many sponsors who made the M3 project a reality. Special thanks go to John Walsh, Senior VP at HRE Wheels, Leslie Heine at Falken Tyres and Brad Otoupalik at Evosport for all their support and time in this project. It should come as no surprise that Joe really enjoys the time behind the wheel but, as busy as he is, he'll hardly have enough time in the foreseeable future to enjoy the 10 000 song files he has stored on the Omnifi's 20GB hard drive. 



# INGEAR INFO