

QUALITY FOCUSSED

Gorgeous Homemade Audio!

Mat Hellard didn't like the standard head unit in his Ford Focus. The display was difficult to read and having always upgraded his car audio he also wanted line outputs and a USB port so he could stream music from his phone. Thus began a journey into car audio, which took Mat to many unexpected places.

Mat's first forays into car audio came as a result of his friend having some obscure American-branded equipment fitted to his car. Mat was impressed with the attack and dynamism that the upgrade provided when listening to the usual heavy bass-led dance music enjoyed by children of the 80's and 90's. As a result, Mat embarked upon a hobby that eventually became a career too.

Mat is a practical man who felt that he could learn to undertake installations himself. Armed with not too much knowledge, he set out to upgrade his early cars himself although he admits that these early attempts were not always successful.

A couple of important things happened to Mat that would change his life and his approach to car audio. Firstly, he got a job as an installer at his local Halfords store. He quickly discovered that although the sales staff had training on product specifications and price, this was not necessarily underpinned by any knowledge of music reproduction and therefore, once they had discovered Mat's wider knowledge often came to him when faced with a customer who wanted better sound. Mat was driven to learn more about good quality audio and how to achieve it in a car.

MAT'S TOP FIVE DRIVING SOUNDS

Sights
London Grammar

Killer
Seal (acoustic version)

All My Friends
Snakehips

The book of love (live)
Gavin James

The way you make me feel
Michael Jackson



Regular Driving Sounds Magazine followers will understand that the head unit in a car can only affect sound to a point. Far more important, is what happens at the business end of a system with speaker, amplifier and subwoofer selection offering a more dramatic effect. Mat craved further knowledge and was excited to stumble across a copy Driving Sounds Magazine. "Driving Sounds was a revelation to me", Mat told me, "I had found some stuff on YouTube, but Driving Sounds seemed to speak directly to me. I also joined the Driving Sounds Club and enjoy receiving the monthly newsletter as it is not jammed full of price promotions and in fact the subtle pointers to new equipment led to some of my product selections."

I was first contacted by Mat in August 2014 when he purchased a copy of Driving Sounds from our online store. He

Above The front-end is discrete so we made Mat remove panels to show us his work - Cruel!

Below Not bad for a first boot build. Carpet tidy, amp looks good, an additional panel protects the subwoofer when in "shopping mode"

followed this up by supplying a Top Five for our newsletter and started to ask advice and keep me up to date with progress on his car.

I was delighted to play a very small part in the speaker selection in his system. Issue V saw Mat finally make up his mind to go for Audison Prima speakers. Mat had originally leaned toward the excellent Hertz Energy ESK 165's I had recommended in a club news bulletin. I like the drive and edge of the mid frequencies and feel they are perfect for classic rock music. However, the launch of Audison Prima speakers got me very excited. When I heard these in a Ford Focus we featured in Issue V, I waxed lyrical. In the meantime, Mat had caught up with Jas and Brian (directors of high-end car audio distributor FOUR) and sat in both of their cars, which completely changed his perception of what was possible and I believe subsequently, the music he listens to.

Mat began with preconceived ideas about the amount of bass and the number of full-range speakers required in a car. But this has changed radically during his education in fact he told me; "I honestly can't remember the last time I recommended that someone fit a pair of rear speakers and tend to coax them to spend more on the fronts and amplification instead."

As Mat was working to a tight budget, he needed to be certain that he made the right choices at every junction. Away went the plans for unnecessary rear-fill speakers, there was to be just a single subwoofer and he had an ambitious plan to fit Audison Prima AP 8 woofers into the front doors of his Focus. This required a major modification to the standard speaker positions, designed around a 6.5" speaker. Mat has managed this aspect of the installation brilliantly and unless he told you, you would not guess how much effort went into achieving this feat. This would be far too much for the average DIY installer to take on - Mat has skills well beyond the average DIY installer however!

A custom-built, slot-ported enclosure containing a single Hertz Energy ES250 10" subwoofer sits in the boot. The visible face of the enclosure is finished in colour-matched carpet and looks like it belongs. The boot floor hides this and the amplifier away when shopping space is required but Mat always intended to use this car to show off his handy work and so the boot floor is completely removable. Also under the

boot floor sits an Audison SRx 3.1 amplifier. Mat was fortunate with this ebay purchase and admits to being worried about this method of acquiring an amplifier. He was lucky to discover that apart from some scratches and blemishes, the amp was in perfect working order - Phew! - We hear plenty of stories of people installing a piece of electronics purchased this way to find it is broken beyond repair!

It is great to see that Mat has gone to town with Skinz sound treatment, employing sound deadening not only in speaker positions but also in most of the rear luggage compartment. This is a smart move, as a luggage compartment can act as an amplifier of road noise from the rear tyres, seriously compromising bass performance. Mat has also filled the front doors with Wave Diffuser, which makes the 8" woofers project more of their sound into the cabin, practically removing attenuation from back waves caused by reflected sound at the rear of the speakers.

Tweeters are mounted in the stock positions. This can be an issue when using ordinary tweeters as the listener is hearing the tweeters off-axis. The mounting positions in this car are very typical of most modern cars and have the tweeters firing at each other right across the car in front of the listener. Fortunately, Audison has spent a lot of development time and money building an incredibly wide dispersion characteristic into their Prima tweeters and due to innovative design, deliver a precise image containing accurate height, width and depth information even when listening at a 90 degree angle from the rear of the speakers.

Mat's infectious enthusiasm and keenness to learn led me to invite him to join us exhibiting at CarFest North last year. We were short-handed and I was keen to see how the

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FEATURE CAR

general public would take to receiving a demonstration from an enthusiast rather than an industry stalwart who might be affected by their 20 or so years in an industry that has seen many ups and downs! Mat was happy to join us, fitted in perfectly and worked really hard demonstrating our three cars and helping to distribute the magazine to many people who love music and have a car but put up with inferior sound, as they do not know it can be made better! Getting to know more about Mat and how his musical tastes have developed over the course of his latest install allowed me to listen to his car from his perspective but also allowed me the luxury of being able to be a bit more unrestrained with criticism - not that I could find much to criticise.

The first track I threw at the system was "Hey Now" by London Grammar. This song mixes guitar with electronic instruments seamlessly and in Mat's car carried bags of atmosphere around the spacious, mournful vocal. At around 1m55s there is an extremely low frequency bass figure that has proven difficult for many a car I have tried it in to articulate. In Mat's this was reproduced perfectly suggesting that he has achieved a magnificent low reach with his sub and enclosure combination. To achieve the required pitch differentiation of bass this low is a real triumph! I was also struck by the lower mid-frequencies, which were clearly responsible for the haunting vocal. The separation allowed enough space for the repeat echo on the guitar to be easily discernible. Mat has used the DSP in his Pioneer head unit to time align his system by ear and I have to say that in terms of sound stage, he has managed this magnificently. It would be interesting to see what tweaks, if any, a professional would make to this. The next track up was "5 a.m." from Dave Gilmour's latest album, "Rattle That Lock". The orchestral introduction was strong and deep and the guitar entry stunning however, I did get just a hint of a dip or hole in the higher mid-frequency range. This was confirmed while playing an HD version of Lou Reed's "Walk on the Wild Side" from the excellent 1971 album, "Transformer". One of the key features of the HD version is the sound of the strings on the upright bass rattling on the fret board. This was less prominent here than in other Prima cars I have listened to, as was the raw harshness of the saxophone. However, those other cars have used bit Play HD rather than a Pioneer head unit to render the FLAC file. Mat treated me to some of his collection including



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a version of "Baker Street" by Livingstone Taylor, which was absolutely stunning as was the selection of Seal numbers from his "Acoustic Album". However, these criticisms are totally arbitrary in the context of the build. Mat has made a fantastic job of this installation and it is very obvious that the bug has not only bitten him, it has burrowed deep within him and laid eggs (yuk!) - I say this as he is already planning upgrades. He identified the lack of high mid-frequencies and has plans to build a housing in the A pillars to accommodate Prima 4" mid-range speakers and would like to replace his SRx amplifier with a Prima AP 8.9 which would allow him to run his system actively and take full advantage of the on-board bit technology. He would also like to add a Prima AP 1D mono block amplifier to drive his subwoofer. I do hope Mat keeps me up to speed with these developments and invites me for a listen once completed. I am sure we will remain in touch and you may well hear from him again in a future issue. □

Above Pleasant conversation arrested while Laurence takes an essential photo!

Below No external clues to the amount of internal modification Mat has carried out

