

Exposure XM3

Exposure's latest phono preamp is in the vanguard of the company's new XM series, begging the question – does it pack a full-sized performance into a 'half width' chassis?
 Review: **Adam Smith** Lab: **Paul Miller**

It seems that audio miniaturisation is currently in vogue. Although cars may be growing ever larger, people seem to want the opposite from their hi-fi systems, and compactness is now the order of the day – without compromising quality of sound. The latest company to pick up on this trend is Exposure Electronics, with the release of its new XM series. This promises to pack a full punch from a compact form factor, and one of the first components to be released is its £660 XM3 phono stage reviewed here.

Naturally, this is just the first of a range that will grow, and suggestions of what will follow were to be seen at this year's Bristol Sound and Vision Show [HFN Apr '17]. Already the XM1 integrated amplifier is available, a preamplifier and pair of monoblocks are destined to follow, and at least one more component is possibly in the pipeline.

COMING FULL CIRCLE

Interestingly, though, this is not the company's first foray into small components. Exposure can trace its heritage back to 1974 with amplifier production commencing in 1978, and a variety of box sizes were used. To cover all of them would probably take up the rest of this review, but in the early days, the power amplifiers were big, the preamplifiers were small and the power supplies varied depending on how hefty their circuitry was.

Surprisingly, however, not many phono stages are featured in the company history. The model 13 was an MM/MC design and was made from 1996 until 2000, with the model 26 subsequently taking up the baton. Generally speaking, though, Exposure stuck with phono stages in its amplifiers for longer than most.

Interestingly, this is a feature that has come full circle with the XM range as, despite the existence of the XM3, the XM5

integrated actually has its own inbuilt phono stage. It is a good quality item but is MM only and has fixed gain, hence the importance of the more flexible XM3.

Internally, the XM3 is based around a single PCB containing all power supply and audio circuitry. A 200VA toroidal transformer occupies the front of the case with a small mains switching and filter board beside it. Eight pairs of capacitors are connected in parallel in the PSU section to achieve the necessary power supply smoothing capacitance but with low ESR. All are good quality Elna components.

Of the main circuitry, Exposure claims it to be based around 'all discrete transistor audio stages' but as there are four Burr-Brown OPA604AP FET-input op-amps gracing the board this may be a tiny exaggeration! That said, these are high quality ICs and are also very much in the minority among the other individual components on the board.

In addition, all signal resistors and capacitors are high specification items and the PCB layout is neat, with all soldering being of high quality. As an added bonus, the casework feels pleasingly solid, while the front panel comes in black or 'titanium' (ie, silver) finishes.

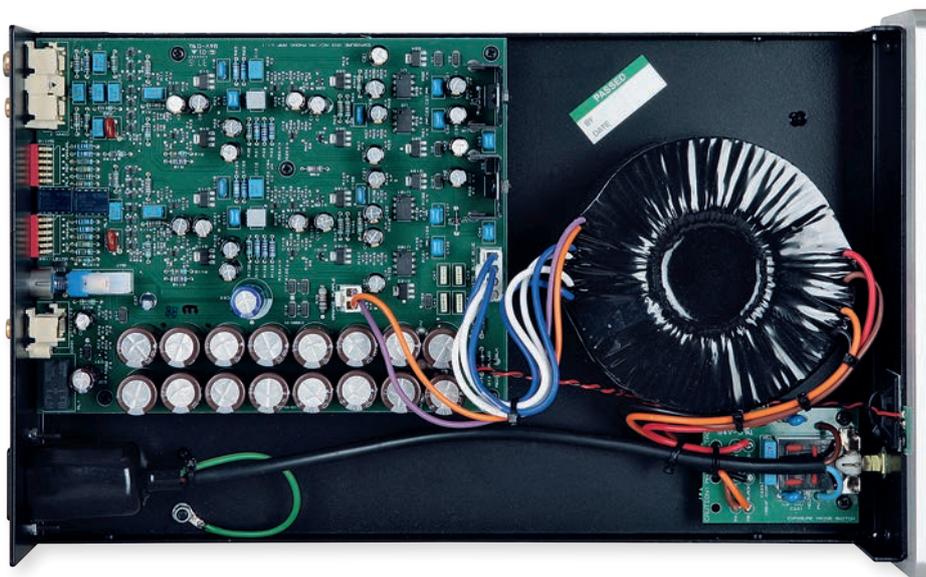
On the front panel, the user is greeted by nothing more than an on/off switch and power LED, but things are a little busier at the rear. The unit has separate input sockets for MM and MC cartridges and these are selected using a push-button on the back panel.

FLEXIBLE BUT FIDDLY

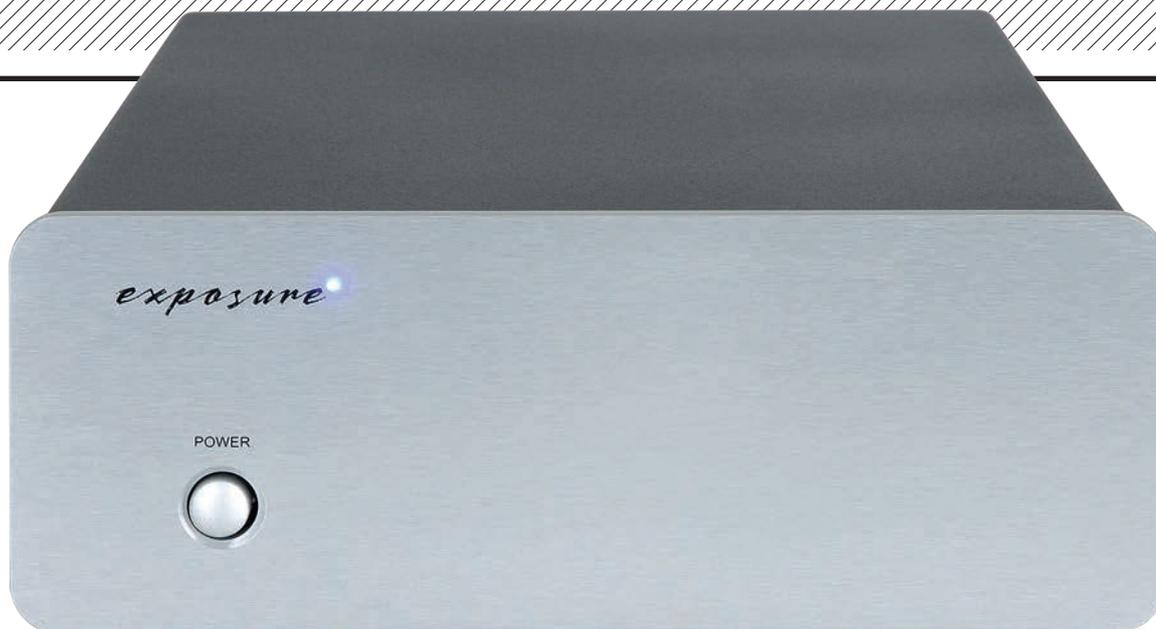
This configuration has the handy bonus of offering the potential to have two turntables connected permanently even if there's only one earth terminal provided. However this utilises a chunky knurled nut that holds three wires (for turntable one, turntable two and output) with no difficulty. In between the input and output sockets are the selection switches for cartridge gain and MC loading.

Unfortunately, these comprise two banks of six of those dratted PCB-mounted DIP switches. Not only are they hidden around the back and as fiddly to adjust as ever, but they aren't even labelled, so the manual has to come out every time you want to change settings (unless you have a particularly impressive memory).

I can appreciate that a series of properly labelled rotaries on the front panel would have pushed the XM3's cost up quite



RIGHT: Powered by an onboard 200VA linear PSU, the XM3 combines op-amp ICs and discrete surface-mount transistors in its active RIAA stage. Note low-ESR capacitor bank



LEFT: Both the XM3 and partnering XM5 integrated amplifier are built into these elegant half-width cases. Aside from the power switch, all the phono preamp's facilities are located on the rear panel [see p61]

considerably, so perhaps a one-time exercise with a jeweller's flat-blade screwdriver or similar, with a magnifying glass to hand, is worth the aggravation!

MM cartridge loading is fixed at 47kohm in parallel with 220pF of capacitance while switches 1-3 of each bank offer MC loading values of 100, 110, 130, 160, 210, 310, 470 and 1500ohm. All of these are in parallel with 6.8nF of capacitance.

Meanwhile, switches 4-6 select gains of 40, 46, 52.4, 54.2, 55, 56.4, 59 and 60dB. The MC loading options are useful but the gain selections are very close together and cover a relatively narrow range. As PM's Lab Report makes clear [p61], this does rather preclude the XM3 from offering sufficient oomph to accommodate very low-output MC pick-ups, so I can't help thinking the same number of settings over a wider span might have been more useful.

'Flutes had real texture and form, cymbals too were vivid'

For the listening tests with the XM3, I made use of both an Ortofon 2M Black MM cartridge and an Audio-Technica AT-33PTG/II MC fitted to the SME 309 arm on my Michell Gyro SE turntable.

CONSISTENCY COUNTS

Starting with the Ortofon, it soon became clear that Exposure has retained its crown as one of the most consistent hi-fi

companies out there – put simply, if you like the 'Exposure sound', you'll love the XM3. In many ways, I was reminded of the bigger 3010s2 phono stage [HFN Feb '14], in that it initially seems to offer no sonic fireworks. Rather, it gently works its way into your affections with its sheer all-round performance. The 3010s2 phono is definitely more accomplished but purchasers of the XM3 need feel in no way short-changed, for at its price level it's firmly 'top drawer'.

With the 2M Black playing, this meant a sweetness and sense of poise across the midband, which set up fine levels of detail and an impressively focused soundstage. Vocalists stood out well from their backing tracks and were projected very capably indeed. The XM3 gave away its affordable price only in the way in which the soundstage depth and width were very slightly curtailed.

The unit never sounded anything close to two-dimensional but it did not quite hang the action out beyond my loudspeakers in the way that some of its competitors manage. Otherwise the XM3 was typically confident and dynamic.

POSITIVE PIANO SOUNDS

The synthesiser action on 'Computer Weekend' from Jean Michel Jarre's *Revolutions* LP [Polydor POLH 45] was beautifully rounded and taut, with the cymbal effects from his drum machine ticking along smartly behind. Bass lines were firm and weighty with plenty of detail, ensuring that low-end action perfectly complemented the rest of the frequency range. It never threatened to overwhelm the main track, neither was it reticent in coming forward when required.

The Exposure XM3 also captured the sonic signature of instruments, both acoustic and electric, and it struck me that this phono stage sounds like a much more expensive design, given the precision and clarity of its treble detail. Cymbals were crisp and vivid, pianoforte notes were positive and taut, with a good sense of the hammers striking strings, just as the XM3 afforded flute notes real texture and form.

Switching to MC I found the XM3's limited gain slightly frustrating. I had to turn my amplifier's volume control ↻

PHONO REVIVAL

The resurgence in vinyl shows no sign of abating – so much so that new phono stages are appearing from more than a few new quarters as well as established brands. At the 'affordable' end of the market, Arcam recently introduced its new £399 rPhono, and vinyl stalwart Rega has just unveiled a £248 MC version of its popular Fono unit. Furthermore, the arrival of the German AVM brand in the UK [see p40] also adds choice with the company's Inspiration P1.2 MM/MC unit.

Somewhat higher up the price range, McIntosh's inaugural standalone phono preamp, the MP100, has been very favourably received [HFN Apr '17] as has Audio Alchemy's PPA-1, which we reviewed together with the brand's PS-5 outboard power supply [HFN Jan '17]. Pathos unveiled its aptly named £1250 'In the Groove' model last year and, if great flexibility is what you need then the four-input, remotely controlled £1245 Cyrus Phono Signature is also a worthy candidate. There's never been a better time to buy yourself a standalone phono stage, and no excuse not to treat your turntable to the preamp that it deserves!

EXPOSURE XM3

Eight closely-spaced gain options are available from the XM3 from 40/46dB (MM) to 52.4dB, 54.2dB, 55dB, 56.4dB, 59dB and 60dB, the latter for use with moderate rather than very low-output MC pick-ups. In practice the gain settings are accurately specified, amounting to +40.2dB, +46.0dB, +52.5dB, +54.3dB, +55.2dB, +56.5dB, +59.0dB and +59.9dB, this representing a range of input sensitivities between 1.02mV-9.83mV (re. 0dBV out). Costlier phono stages may offer a wider gain range, and certainly up to +70dB to accommodate low-output MCs, but within its narrow specification the XM3 does at least offer a generous input headroom. The lowest +40dB setting will handle a full 101mV input before clipping, or +26dB above the IEC MM standard of 5mV, and more than sufficient to deal with the hottest vinyl grooves. The +60dB input gain setting offers a headroom of 10.2mV, or +26.2dB re. the 500µV MC input standard.

Distortion is very low at typically 0.003% up to 3V output, with 10V possible before clipping, and increasing only slightly to ~0.006% at very high frequencies [see Graph 2, below]. Distortion from the best pick-ups will be at least 100x higher than this! The XM3's substantive PSU does contribute to a residual noise of -77dBV, however, and this also limits the overall A-wtd S/N to 84.1dB (+40dB MM input, re. 5mV in/0dBV out) and 69.2dB (+60dB MC input, re. 500µV in/0dBV out). In practice these figures are still above average and better than Exposure's own spec. Similarly, the RIAA response is very flat and extended, within ±0.1dB from 50Hz to 100kHz, although the XM3 includes a subsonic pole amounting to -3dB/15Hz (or -1.7dB/20Hz) to attenuate any excessive sub-bass output from record warps etc [see Graph 1, below]. PM



ABOVE: MM and MC inputs on RCAs are selected via a pushbutton while DIP switches select cartridge loading and gain from +40dB to +60dB

up a bit further than usual and this, unfortunately, brought about a very faint increase in background noise when listening to quiet passages. Nevertheless, its sound quality remained deeply impressive for – as per its performance on MM – the XM3 simply let my moving-coil pick-up do the work and took away nothing from the performance.

COMING ON SONG

The wide range of MC loading options was a boon, as the AT33PTG/II responds better than most cartridges to a judicious fettling of load impedance. It's generally happy at a standard 100ohm but experimentation revealed that it really came into its own with the 160ohm setting. The number of options on Exposure's XM3 really does mean that it can lock on to the optimum setting for a moving-coil cartridge, thereby ensuring the very best performance.

With this fine-tuning complete, the XM3 absolutely sang. The sampled vocals from DJ Shadow's 'Six Days' on the 2012 compilation *Reconstructed: The Best Of DJ Shadow* [Island 3712862] were vivid and perfectly supported by the added backing track, while larger scale rock and orchestral works were blessed with a good sense of body and weight.

The XM3 revealed exactly what needed to be heard in order to allow a piece of music to really come together as a performance, rather than seeming like just a collection of instruments playing along at the same time as each other.

Switching across some different music genres, the XM3 proved largely uncritical of what it was fed. Classical encores rang out strongly and yet dropped to a subtle whisper

when required, and a spot of hard rocking showed that the XM3 can indeed mosh when necessary. Equally, more subtle acoustic material was smooth and languid, with both male and female vocalists expressed in realistic fashion.

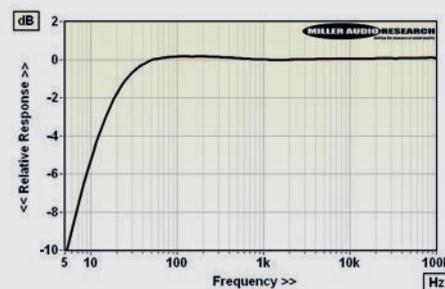
The final icing on the cake was the way in which the XM3 dealt with poorer recordings. This is something more than a few phono stages struggle with, but Exposure has endowed the XM3 with a surprising competence in this area. Rather than making it obvious that inadequate mastering is holding back a performance, the XM3 seems capable of concentrating your attention on the good bits!

Fatal Charm's 'Summer Spies' 12in single [Carrere Records CART 340] was a perfect example of this, being something of a thin 1980s pressing that can lack body and impact across the upper bass and midband. The XM3 did nothing to hide the fact, but also held the beat perfectly and made it clear that singer Sarah Simmonds really does have a very lovely voice. ☺

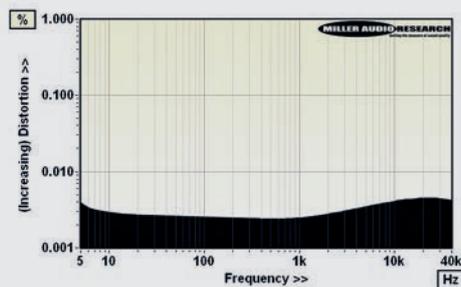
HI-FI NEWS VERDICT

Exposure has done it again with the XM3. It's a phono stage that announces its abilities by simply getting out of the way of the music and allowing your chosen cartridge to work its magic. Yes, the switches could be less fiddly and, yes, it could do with more gain as it is certainly capable of doing a low-output MC justice. But, frankly, at this price, to complain too loudly would seem more than a little churlish.

Sound Quality: 81%



ABOVE: RIAA-corrected, extended frequency response, 0dBV out (left channel, black; right channel, red)



ABOVE: Distortion versus extended frequency, MM input (5Hz-40kHz, 40dB gain) at 1000mV out

HI-FI NEWS SPECIFICATIONS

Input loading	100ohm-47kohm/220-6800pF
Input sensitivity (re. 0dBV)	1.02mV-9.83mV
Input overload (re. 1% THD)	10.2mV-101mV
Max. output (re. 1% THD) / Imp.	10V / 30-50ohm
A-wtd S/N ratio (MM/MC, re. 0dBV)	84.1dB / 69.2dB
Frequency resp. (20Hz-20kHz/100kHz)	-1.7dB to -0.06dB / +0.12dB
Distortion (20Hz-20kHz, re. -20dBV)	0.0022-0.0045%
Power consumption	10W
Dimensions (WHD) / Weight	218x89x348mm / 4kg