

Dynavector P75 Phono-stage

by Jason Hector

In issue 24 I attempted the job of testing four phono-stage solutions at the lower price end of the spectrum. It turned out to be very instructive and demonstrated that a few pounds can make all the difference, as can the specific aims of the designer. My personal favourite turned out to be the MM only Graham Slee Era Gold at \$400, give or take a penny. Mind you I didn't remotely hear all of the options in a wide open field, with devices like the Tom Evans Micro-groove an obvious contender. At a price of \$450 the subject of this review, the Dynavector P75, is entering a surprisingly competitive market place considering we are talking about a niche product in a niche market.

A cursory examination reveals that the Dynavector follows similar lines to the stages I looked at before; a small unpretentious box for the stage itself and a separate power supply. A "wall wart" type in this case, which supplies a basic DC voltage to the phono-stage. At this point the similarities start to end as the Dynavector designer, Jonathon Davies, has gone in a very unexpected direction with the rest of the power supply.

Most audio electronics make use of standard power supplies, usually consisting of a big transformer to step the mains down, followed by a rectifier (achieving AC to DC). Then some sort of smoothing (usually through capacitive storage of charge) and if you're lucky a linear regulator to remove as much of the rest of the ripple on the ideally DC lines as possible. The other common type of power supply that seems to be spreading through audio, albeit with mixed results, is the switch mode supply. Switch mode supplies offer some very obvious technical benefits but commonly these have always been used to make cheaper, smaller, lighter

and more efficient products for mass market applications (PC power supplies are the most obvious). In operation, switch mode supplies chop up (or switch) the incoming power lines at a high frequency making an AC signal which can then be rectified and filtered to DC. Because switch mode supplies operate at this very high frequency



(100's of kHz is normal) they do not require such large components, or expensive linear regulators, to achieve smoothing and regulation of the generated supply rails. To put it another way, to achieve a given power supply specification smaller, lower specification (and hence cheaper) components can be used and this is the attraction to the consumer electronics companies that use them. In audio applications a better regulated (lower rail noise and faster) power supply can theoretically be made for the same money than the equivalent traditional supply: same benefit, different emphasis. The Achilles heel of the switch mode supply is the switching itself. If the supply is not adequately designed you run the risk of generating noise into the circuits being powered.

Dynavector believe so strongly that

they have solved the noise issues with their implementation that they have decided to include the switch mode part of the power supply inside this phono-stage right up close and personal to the amplifying electronics. Considering a phono-stage is designed to handle the smallest signals in audio (MC cartridge outputs) any noise from the power supply would be a disaster. So the P75 power supply really comes in two halves. The raw mains AC is stepped down and rectified to DC in the wall-wart supply already mentioned and then this DC supply feeds the switching DC to DC converter and regulator.

Because of this stacking of the two supplies Dynavector claim that the quality of the wall wart supply and the mains itself will have no impact on the performance of the phono-stage: big claims indeed.

Looking at the circuitry inside the phono-stage it is apparent that the supply is well thought out using a novel input PCB transformer, made possible because of the 250kHz operating speed of the supply. Placing the supply this close to the amplifying circuits reduces the impedance between them, always a good thing.

All of the loading and gain settings are programmed inside the P75 by shifting jumpers around. A word of warning is needed at this point, especially if you are of the ham-fisted tendency, the jumpers are small and tightly packed in amongst the rest of the circuit components. Adjustment almost mandates the use of haemostats and is a job ideally suited to your dealer who should have the necessary tools and will know the best settings for your cartridge. The P-75 offers settings for both MM (also for MI and high output MC) and low output MC cartridges. The gain setting for MCs is either 60 or 63 dB ►

► which makes them suitable for cartridges with outputs of 0.2mV or 0.15mV respectively. The loading can also be switched between 30, 100 and 470 Ohms in low output MC mode. The MM mode offers 40dB of gain (suitable for cartridges with 2mV output) and offers the usual 47kOhm loading. Capacitive loading is not adjustable in either gain regime.



I'll start the discussion of sound quality by recording my initial reaction when it entered my system: Dynavector TeKaitora in a Well Tempered Reference which at the time fed a Dynavector amplification chain (consisting of a P100, L100 and HX75) all terminated with a pair of Shahinian Obelisks. Home territory for the Dynavector, but you can expect an away match in a forthcoming issue. The diminutive P75 simply replaced the P100 and, initially, I used its out of the box settings (63dB gain and 100 Ohm loading). On to the deck went the excellent Diverse pressing of Richard Thompson - Old Kit Bag. Initial observations were that the P75 was something a little bit special. Immediately obvious was the detail it was allowing through and the sheer dynamic power the P75 could bring to the proceedings was very impressive indeed, maybe a little too impressive. Playing more records revealed a slight hardness and a lack of the organic nature possessed by the P100, most obvious in the mid-range. Fortunately

this negative aspect to the sound was relatively short lived and over the next few hours (into the early hours of the next morning) the stage settled down to a much more even sound. The powerful, dynamic attributes were retained but the hardness was replaced by a relaxed but accurate presentation, never fatiguing but still full of detail. The P75 continued to improve over the next 24 hours but after that it seemed to stabilise quickly.

However, it always seems to need a full day to return to its maximum performance after being switched off for any lengthy period. So once the P75 was settled in and connected up using my preferred bullet plugged microphone cable I settled down with it to just listen to music. Since the P75 was in my system during a rather hectic period for me, this review has been delayed a few times which has been quite pleasant because I have had the opportunity to listen to it in great depth and in another, albeit similar (Well Tempered and Dynavector) system.

The P75 is best characterised by what it lacks ...

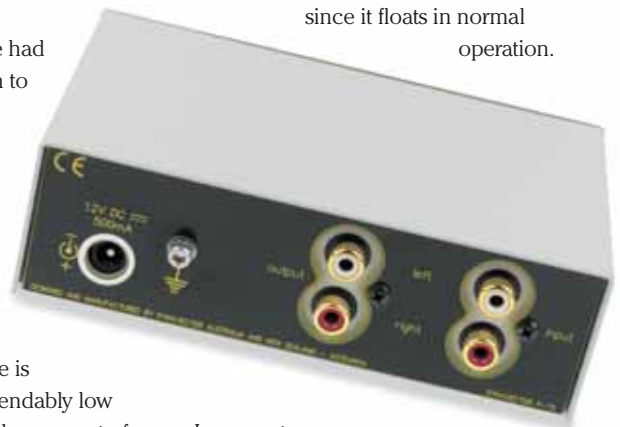
Firstly it lacks noise: background noise is impressive by its commendably low value, especially when the amount of gain available is considered. Instruments materialising on a low-noise background strike you as more realistic even if the genuine recorded ambient noise is high.

Secondly it lacks a constrained dynamic range: from large transients (just listen to a well recorded drum kit like the one on the Kings of Leon – *Youth And Young Manhood*) to the gentle caress of a whispered voice, the range, contrast and speed of attack

are exemplary.

Thirdly it lacks mechanical timing: by which I mean that the P75 fails to impart or impose any false sense of timing on the music and this means a wider gamut of emotions are presented to you irrespective of genre.

The construction of the P75 is simple and innovative (why waste pounds on expensive cast or machined and printed front and back plates when PCBs can do the same job very cheaply?) and a little, well, basic. In this area the Lehmann I looked at before leaves it and the rest of the competition wanting. The rest of the case is steel which the designer prefers because it gives improved shielding, both of the super sensitive circuitry inside and to stop any of that switching noise escaping the box with unpredictable results. Round the back the inputs and outputs are all phono sockets. A small (and difficult to use with bare wire) earth binding post is provided. This may or may not be needed and if used you need to ensure there is a path to ground from the P75 since it floats in normal operation.



In my system and location I didn't need it but in another location the binding post, connected to ground, was necessary to avoid some hummmmmmm.

This Dynavector stage has a further trick up its sleeve. Not content with offering the traditional gain and resistor loading the P75 includes a mode called Phono Enhancer which is a reworking of a technique invented by Dr. Tominari of Dynavector Japan. This mode gets ►

► rid of the input resistor, found in almost all other phono-stages, and configures the P75 to act as a current amplifier. The result is that the coils of the cartridge see an effective short circuit as load, the ideal condition. Within the Phono Enhancer mode there are three gain settings but the actual gain level achieved in this mode is dependent on the output impedance of the cartridge. The Phono Enhancer mode is only really suitable for cartridges with low output impedance. Unsurprisingly, Dynavector Japan's cartridges from the 17D2 upward have the necessary low impedance.

After familiarising myself with the standard MC settings I switched the P75 over to Phono Enhancer mode. Cripes, what a difference! I was obviously expecting a different sound and in this assumption I was partly wrong and partly underestimating the differences. Phono Enhancer or Dr. T. mode lifts this stage's sound quality to new levels and price brackets (but remember, this is in the context of my Dynavector TeKaitora). The sound produced is still characterised by the great dynamics, neutral rendition and ease of listening shown in the other modes. In other words it's still the same phono-stage, but it is simply a better version. You can dissect the changes wrought by moving a few jumpers; more bass with even better control, more detail - but it's the way these things are incorporated into the whole picture that so impresses me in the standard gain modes. Phono

Enhancer does an even better job.

Listening to Suzanne Vega - *99.9F Degrees* or Holly Golightly - *Truly She Is None Other* in Phono Enhancer mode and we are more aware of their vocal intonation. In both cases the frequently complex backing instrumentation made more sense because of the ability to resolve and integrate the music into a whole. If you aren't resolving all of the detail then you aren't hearing all of the music in the grooves. But its not that simple, and conversely if a system doesn't keep everything together in time then all the extra information is wasted and it can even distract from the message the performer is trying to get across; No such concerns with the P75. Instrumental tonality was up there with my P100 (and the Lehmann) and that is impressive. There is no greying out of the richness of acoustic instruments, and the differences between guitar amps, for example, are plain to hear.

Playing an old favourite is always instructive because you really know what is in the grooves, or at least you think you do. Amongst many others (including a new pressing of REM - *Automatic For The People* which sounds great, and numerous returns to the J. J. Cale and Steely Dan back catalogue) I cued up Lloyd Cole - *Mainstream* and settled back. The result? Effortless emotional involvement from a sound that just flows into the room. This really highlights what the Dynavector P75 is all about - musical neutrality.

I have really enjoyed owning and using the Dynavector P100 stage but the P75 has equalled (and surpassed in some areas) its predecessor's performance for a third the price, a great achievement. I think there is a very real risk that the P75 will be overlooked on grounds of price; it's simply too cheap to appeal to some big-spending audiophiles. But that would be a huge mistake. Buy one of these little beauties and I can guarantee that the CD player will be seeing a lot less action from then on. ►+

TECHNICAL SPECIFICATIONS

Low output MC - Standard:

Input Sensitivity: 0.2mV or 0.15mV

Gain: 60 & 63dB

Loading: 30, 100, 470 Ohms

Low output MC - Phono Enhancer

Input Sensitivity: As above

Gain: As above

Loading: Zero Ohms

High output MC, MM and MI

Input Sensitivity: 2mV

Gain: 40dB

Loading: 47kOhms

Dimensions (WxHxD):

Price: £475

UK Distributor:

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