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## Classic Audio Spartan 10 Phonostage

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### CLASSIC AUDIO SPARTAN 10 PHONOSTAGE REVIEW

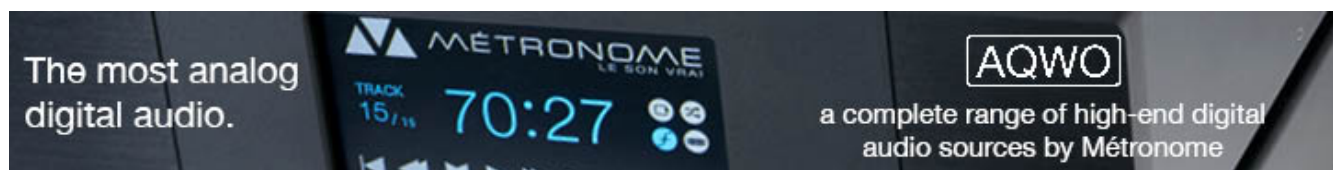
The Classic Audio Spartan 10 is the first product from this UK-based headed up by Michael Fidler. Janine Elliot spins some discs through this £350 moving magnet only phonostage.



Classic Audio Spartan 10 MM phonostage rear panel

This review has been a long time coming; a moving magnet phono-stage that at £350 takes on the competition at much higher price points. I was first aware of the brand-new design in early 2021 and after much product development and tweaks was sent the finished article at the end of December.

Classic Audio was set up in May 2020 and this is their first product. Michael Fidler's company is based in Rainham, Kent and he has had many years of working with electronics, with careers as an electronics technician/engineer and working in marine electronics/avionics.



"I've worked in electronics on and off for some 10 years. Most recently I was employed at BAE systems working on avionics (until November 2021). I decided to leave BAE to work on Classic Audio" Quite some career change, with plenty at risk, though Michael has much to offer in terms of design and finish. He was not happy to send me the Spartan until it was perfect. I like this attitude.

He spent most of his youth listening to records including lots of 78s, having been interested in shellacs from the age of about 8. He was always fascinated by the electro-mechanical process of recording sound on records and their playback and used to listen to 78s on an old suitcase-type auto-changer that he'd adapted to produce a line output that could connect to his dad's 1980s HiFi system that he'd donated to him. As a teenager, he started building his own amplifiers, mostly solid-state. Much of his youth was spent repairing classic 1970s HiFi and reverse-engineering the circuits for his own designs. Later, using the service manuals on sites like HiFi Engine gave him access to a wealth of useful information on how to design and layout high-quality audio. He never spent too much time on the DIY forums, although a few of his designs are out there.

Now 27 he is producing his first professional product, a phonostage. He chose this because it was a good technical challenge; getting the right RIAA curve, plenty of amplification and adding necessary electronics to get rid of the horrible 8-12Hz artefacts from the vertical axis of vinyl discs. His thoughts on producing this phono-stage, however, go back some 10 years. In the near future, he has plans for a big lineup of new products; a headphone amp, a single-stage amplifier and, very exciting, a 78rpm phono-stage with 6 settings for the different formats of shellacs that appeared until RIAA became the flavour of the day.



Classic Audio Spartan 10 MM phonostage is spartan in looks but with more than you'd think onboard.



## FEATURES AND SPECIFICATIONS

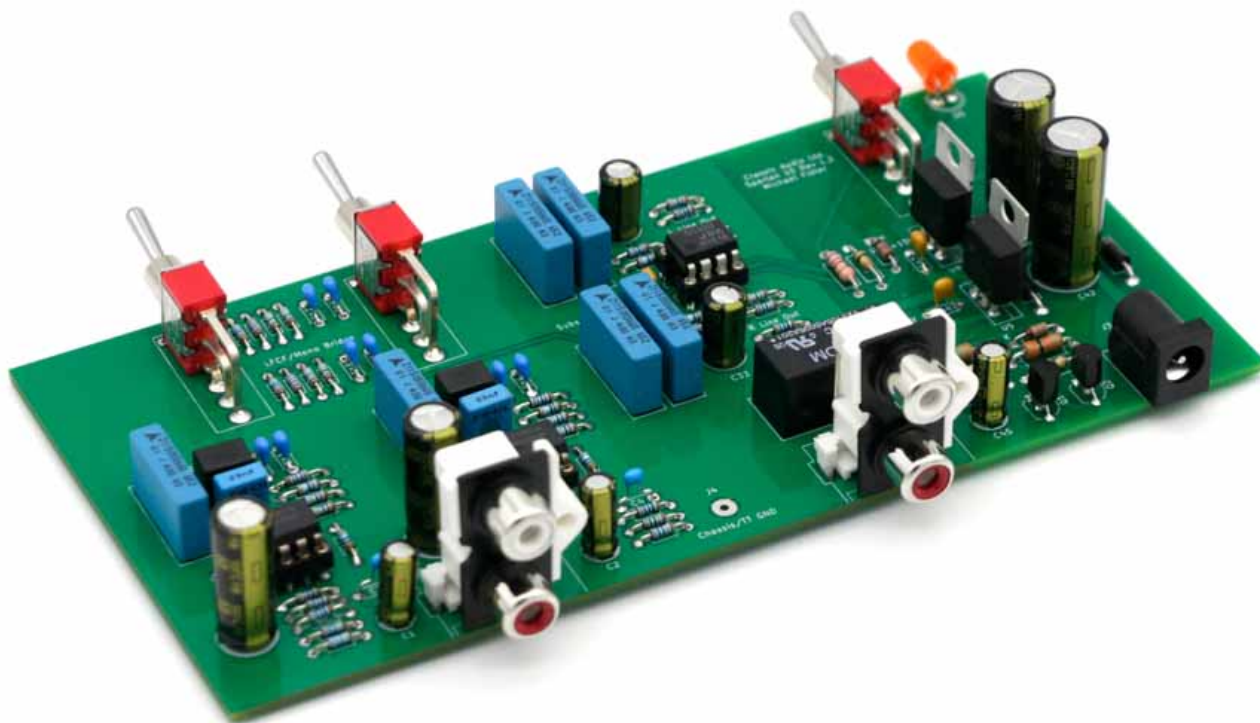
For £350 there is a lot of design work here. Think of this like a Graham Slee product; the same type of aluminium shell and switching gear and price points. He seems to put in similar attention to detail and modifications in order to get the best as Mr Slee does. Indeed, at the start of my review I listened to the Spartan alongside the similarly priced Slee ERA Gold V.



With dimensions of 170 x 115 x 55mm including knobs and feet, the front panel consists of an on/off switch (hurrah! I really hate on/off switches at the rear!) and, unusually, an orange light, plus a mono/stereo switch and LFC (Low Frequency Crossfield) switch. This blends the channels below 140Hz using a 1<sup>st</sup> order 6dB/octave filter to reduce audible noise. It's noted that switching a record to mono as you play it gets rid of much of the rumble and surface imperfections on the LP, so the LFC circuitry does this by blending the lower sounds together while keeping the higher frequency directional sounds as stereo. Additionally, there is a subsonic filter built in to eradicate all that horrible vertical noise that is produced by a disc at around 8-12Hz. Without removing these extremely low inaudible frequencies, they will make their way down the chain of amplification to the loudspeaker, distorting the sound as it goes. The 18dB/octave subsonic filter with a -3dB turnover at 22Hz, attenuates subsonic sounds by over 20dB (a factor of 10) at 10Hz and with a claimed response flatness within 0.1dB down to 35Hz. Where most phonostages might put 100% of gain in the first amplifier stage, the Spartan 10 splits the gain between the front end and output stage and has the LFC and subsonic filter placed between the two stages meaning subsonic interference won't eat into the overall headroom. Having it before the final 7dB of the total 41.6dB of gain is realised, the subsonic content can't eat into the final overload margin of the phono-stage, as it does in many other designs that implement the filter after all the gain has been applied. The subsonic filter uses capacitors with ½% tolerance. The amplification stages use very quiet NE5534 and NE5532 op-amps and employ a carefully tuned precision RIAA equalisation network utilising 1% tolerance polypropylene film audio capacitors and metal film resistors to attain a guaranteed RIAA playback accuracy of ±0.1dB all the way from 35Hz to 22kHz.

The rear of the Spartan 10 has the usual RCA in and out sockets plus a turntable ground. Mains is supplied by a ±15V split linear PSU, as opposed to a cheaper switching power supply. The MM phonostage input is set at 50kOhm, slightly higher than the industry 47kOhm in order to allow for some cable shortening (the shorter the cables the less likelihood of hum interference). Having it at 50kOhm means there is a slight increase in frequency response. For all tests I used cables less than 1m in length. It was easy to set up the Spartan 10 ready to test, and I had a choice of three turntables set up for use, including the ancient Transcriptors Hydraulic Reference (with SME3 arm and Shure V15iv cartridge). This would be a good test

for the LFC and especially hum, as this turntable is not the quietest. My other turntables included the Townshend Rock 7/Rega 301 with Ortofon 2M Red, and Technics SLQ2 direct-drive turntable with Ortofon VMS 20e mk2.



Inside the Classic Audio Spartan 10 MM phonostage

## SOUND QUALITY

The Spartan 10PS has a startup relay muting circuit, delaying sound for a second to ensure there is no noise. On switch-on I was immediately impressed by the sound emanating from a £350 phono-stage, or rather lack of it, as this is an exceptionally quiet phono-stage. Once I played music I was equally impressed by the quick transients and an extended frequency curve. The mid-frequency and top were particularly good.

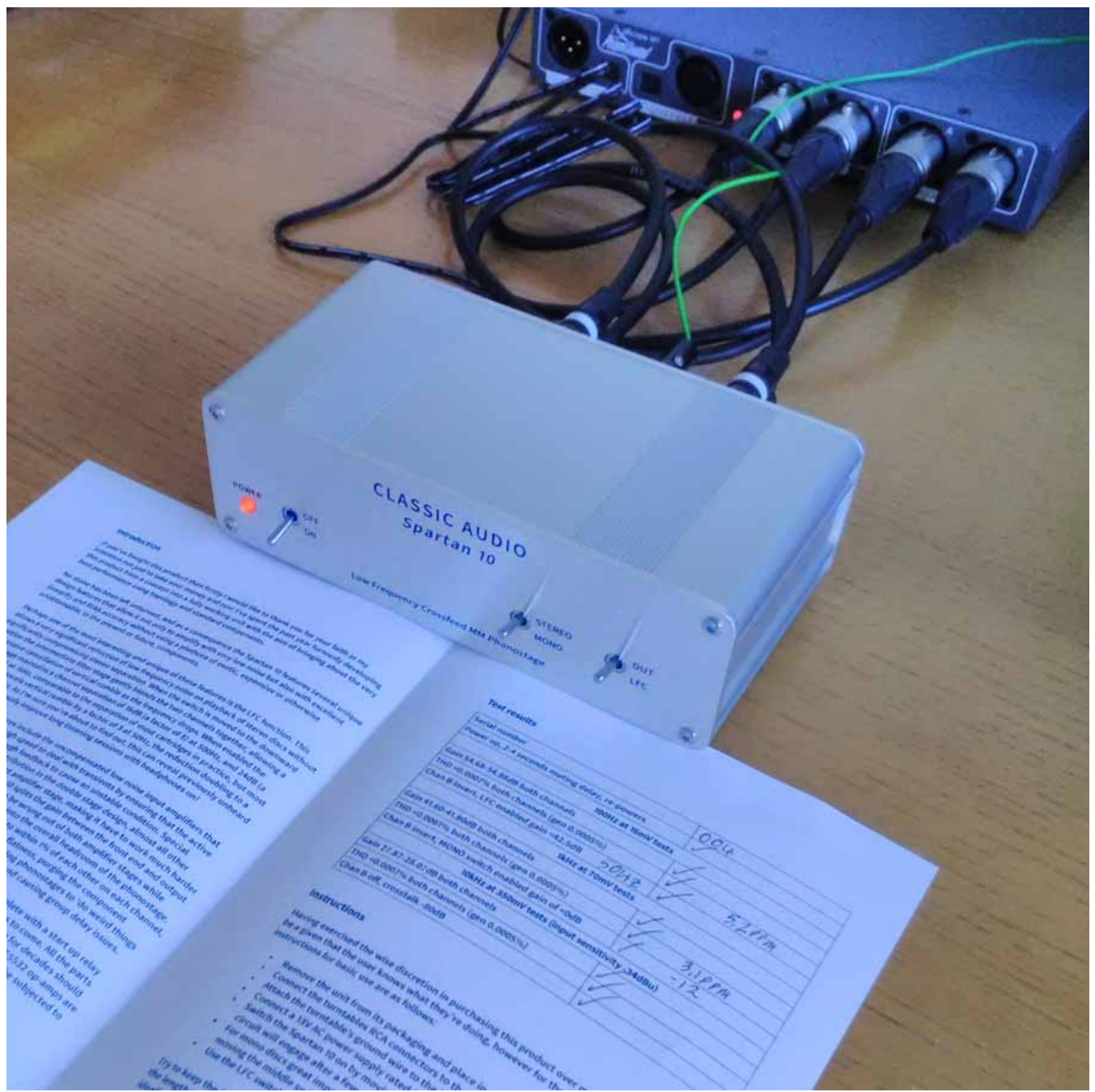
Asia's 'Alpha' can often sound gritty but the Spartan coped with it with a musicality that surprised me for the price. 'Alpha' is a heavy rock album including such greats as Steve Howe and Geoff Downes (Yes) and Carl Palmer (ELP). The musicianship is excellent and the phonostage didn't let anything escape. Vocals were particularly good. Musically the V15iv was the best of the cartridges, though both Ortofon's surpassed themselves. As a contrast, the Slee Era phonostage had more bass end but was not so crystal clear on tops as the Spartan. The iconic V15iv through the Spartan had excellent clarity and speed of transients. On the track "On My Own" the dynamic range was particularly good, largely due to the excellent noise floor and the acoustic guitar had excellent clarity.

Turning to Genesis '3 Sides Live' on the Technics, "In the Cage" wasn't as claustrophobic as I have heard



from phonostages costing the other side of three "0"s. There was solid drumming and Tony Bank's bass keyboard was very tight and clear, as were his melodic lines. The speed of transients was good, but top-end detail not so good though the Technics.

On the much higher priced Townshend Rock things really opened up and the excellence from such a cheaply priced phono-stage really showed its worth. 'Harbour Jazzband' is a trad' jazz band founded in 1956 in Rotterdam playing anything from Jelly Roll Morton to Duke Ellington. This was played with such elegance on the 2M cartridge with exquisite top end and tight and energetic bass. That subsonic filter kept the music decisive and in control with no 8-12Hz artefacts eating away at the music. There was plenty in reserve if the record had it.



Testing the Classic Audio Spartan 10 MM phonostage

Turning to classics and H.Q Supercuts Barbarolli Strings, this re-master of an early 1960's recording was

again decisive and clearly detailed with an excellent stereo spread, and unlike some records I played, I did find I preferred this with the LFC switched in.

Checking that bass end performance, what better than to perform Bach Toccata and Fugue in D minor from Archiv. I did feel there was a slight loss in detail and oomph in the lowest organ pedal notes with the LFC left in, but again I preferred the performance in this position as there was better control and musical detail. And with the subsonic filter things were very clear and realistic. Another way to tackle this issue is the oil trough and paddle in my Townshend Rock 7, from dear friend Max Townshend who sadly passed away as I was writing this review. He had the right idea to tackle this extreme bass noise at source, though I am glad that in such an excellently priced unit as the Spartan 10, not only are there two filters but the LFC can be switched off if you feel it needs to be.

## CONCLUSION

If you are in the market for a very reasonably priced phono-stage you could well do to check this one out.

The casework is OK, but even if the unit doubled in price because of a top-end cabinet, then this would be just as good value and you would not be disappointed.

The electronics work well with good transients, excellent mid and top end and good noise floor.

Works well on lower and mid-priced turntables.

## AT A GLANCE

### Build Quality:

Good build using basic box design

### Sound Quality:

Excellent top-end and detail

### Value For Money:

Very reasonably priced

### We Loved:

Excellent transients

Excellent S/N ratio

Excellent mid and top-end

### We Didn't Love So Much:

The extreme bass is not as detailed as I would like, but still good for £350

**Price:** £350



**Elevator Pitch Review:** Never heard of Michael Fidler? Take note, this is an excellent first product from a young man about to release lots of new products. The first is this MM phono-stage. Everything is there for £350 in this tiny box, including a subsonic filter dealing with that horrible and inaudible 8-12Hz vinyl noise, plus another low-frequency crossfield filter that just works to reduce audible low frequency noise. All it needs to do is sound good, and luckily it ticks all boxes for me.

### SUPPLIED BY CLASSIC AUDIO



#### **Janine Elliot**

**Review Equipment:** Three turntables (Transcriptors Hydraulic Reference/SME3/Shure v15iv; Townshend Rock 7/Rega 301 with Ortofon 2M Red; Technics SLQ2 direct-drive turntable with Ortofon VMS 20e mk2); Slee Proprius poweramp and Majestic preamp, Graham Audio LS5/9 and Chartwell LS3/5a speakers. Ecosse and Townshend cables.

#### **Specification**

Parameter	Spartan 10
RIAA accuracy	0.1dB, 35Hz to 22kHz
Channel balance	0.1dB, 35Hz to 22kHz
Channel separation	80dB, 20Hz to 22kHz
Signal to noise ratio	78dB, at output ref 5mV cartridge load
THD + Noise	<0.0007%, 35Hz to 22kHz, 9V RMS output
Maximum output	>9V RMS, 18Hz to 100kHz
Maximum input at 1kHz	75mV RMS
Maximum input at 10kHz	350mV RMS
Overload margin, ref 5mV	23.5dB
Gain at 1kHz	41.6dB, 120x
Output impedance	100Ω
Minimum load impedance	2kΩ
Input impedance	50kΩ, ±1%
Input capacitance	120pF

Mono switch	Toggle, front panel
On switch, muting relay	Toggle, front panel
Subsonic filter	22Hz, 3rd order
Power supply	Split linear $\pm 15V$
Advertised price	£350



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