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# Mola Mola Lupe

Developed from the phono stage debuted in the Makua preamp and Kula integrated, the Lupe is a deceptively simple-looking but hugely flexible, app-driven phono preamp

Review: Adam Smith Lab: Paul Miller

In recent years Dutch firm Mola Mola has spread its wings from the Bruno Putzeys-designed pre/power amplifiers it debuted at CES in 2013 to include partnering separates. The first of these was the innovative Tambaqui DAC [HFN Nov '19], which fleshed out the company's optional digital module into a standalone design, and into the Kula integrated [HFN Oct '21]. These are now joined by the £7299 Lupe phono preamplifier named, in typical Mola Mola fashion, after a fish – 'Lupe' being the Hawaiian name for the broad stingray.

The Lupe is also a development of an earlier module, in this case the phono stage originally crafted for the Makua preamplifier [HFN Aug '17] and later also leveraged into the Kula. The basic building blocks of the RIAA network are retained, albeit highly refined into separate MM and MC stages, and include Mola Mola's custom discrete op-amp modules. The balanced output stage is the same as that used in the Makua and Kula while a new, comprehensively screened power supply [see inside pic, below] supports what Mola Mola claims is 'extremely silent and powerful signal transmission'.

## OUT WITH THE OLD

As an initial hint to the flexibility of the Lupe, you'll find plenty of sockets on the rear of its curvaceous, piscine, half-width enclosure. These comprise one pair of balanced XLR inputs, three pairs of unbalanced phono inputs, plus one pair each of RCA and XLR outputs. Also fitted are three separate grounding terminals, plus trigger input and output through 3.5mm jack sockets.

There's less of a view around the front, because the Lupe is operated through a series of presets rather than having physical

gain, loading and other settings that are adjusted via a matrix of DIP switches. In Mola Mola's universe, that approach is very 'old school'. Instead, four small buttons on the unit's aluminium fascia – two either side of its central, circular display – correspond to four pre-configured settings. These are managed using Mola Mola's Bluetooth-based smartphone app [see boxout, p69], which enables an intricate adjustment of loading and, in particular, MM/MC gain which spans 45-50dB and 52-87dB, respectively, in fine 5dB steps.

In practice, the Lupe's huge range of adjustments – including no fewer than 44 legacy/pre-RIAA eq curves – means there's not a pick-up or LP label out there it won't handle. Within those curves you can also change the upper and lower time constants, plus the bass shelf, to alter the frequency response. I can't help thinking this might be a few adjustments too far – accurately recreating a particular curve and then giving users the opportunity to fiddle with it seems a little self-defeating. Still, Mola Mola says

in the Lupe's user manual that it's 'aware of customers using these as a kind of tone control. This is fine, of course'.

## TAKING CONTROL

The Lupe is factory-configured with inputs 1, 3 and 4 set to MM with 47kohm loading, 45dB of gain and 100pF of capacitance, while input 2 is set to MC, a 250ohm load and 52dB of gain. A remote control [which also uses Bluetooth, see p71] is supplied, but this only switches between presets, and operates mono, subsonic filter and muting functions.

In use, the Remote app is straightforward and being able to make 'on the fly' adjustments is very convenient. Be aware, however, that the Lupe contains protection against DC or overload at the output whereupon the subsonic filter is engaged. If this is triggered – if you set too high a gain and drop the stylus, for example – then 'normal service' may be resumed by clicking onto an adjacent input preset on the fascia before clicking back onto the input you want.

**'Its presentation oozes both authority and sure-footedness'**



**RIGHT:** The Lupe phono preamp has its power supply [far right] comprehensively screened away from the two stacked input/output PCBs [near left] and RIAA stage with its custom, edge-mounted op-amps [centre]. BT receiver [far right] enables app control [see boxout, p69]



For my extended auditioning, I connected the Lupe to my regular Yamaha C-5000 preamplifier [HFN Aug '20] and Michell Gyro SE/SME V turntable set-up with a variety of cartridges, including an Ortofon 2M Black MM [HFN Mar '11], plus Ortofon Cadenza Black and Denon DL-103 [HFN Jul '09] MCs.

### MASTER AND COMMANDER

Whether used with an MM or MC cartridge, the sound of the Lupe is as sophisticated as the hardware's appearance and functionality. Mola Mola's standalone

phono amp has an unmistakable authority and sure-footedness to its presentation, bolstered by a rock-solid bass and a commanding sense of scale and precision to the soundstage.

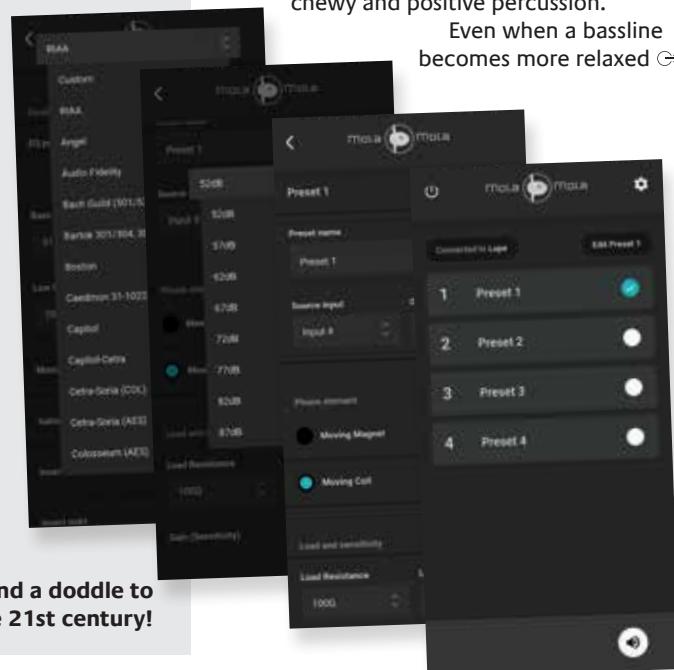
There's also a pleasing uniformity from the lowest to the highest frequencies, with no areas overtly accentuated. Dialling in the optimum gain and loading for your chosen pick-up is more than fine-tuning, however – it's a prerequisite to realising all the Lupe has to offer [see PM's Lab Report, p71]. This phono stage has such a well-balanced sound that if something doesn't

### MOLA MOLA APP

**The Mola Mola Remote app, for iOS and Android devices, acts as a Bluetooth controller across the range, the interface adapting to the model in use – if you have more than one Mola Mola product in your system, they will appear as a list on the home screen. For the Lupe phono stage, the main menu window is simply a choice of its four presets, although an overall device settings page also allows you to choose the brightness of the front panel LEDs and the display; turn the display off completely; and re-name both the device and the presets – handy for remembering which connected cartridge or turntable requires which one.**

Once a preset is selected, a button at the top of the screen invites its configuration. For MM cartridges, gains of 45dB and 50dB are available, plus loads of 18k, 30k, 47k, 75k and 120kohm and capacitance options of 0, 50, 100, 150, 220, 270, 330 and 380pF. For MC, the gain settings are 52, 57, 62, 67, 72, 77, 82 and 87dB with resistive loads of 60, 100, 150, 250, 400, 650ohm and 1kohm. The desired input and output sockets can also be chosen, along with RIAA and historical LP replay curves [see app screenshots, right], including tweaks to the upper and lower time constants, and bass shelf adjustments.

Finally, polarity inversion, mono, subsonic filter and triggers are all toggled via a series of virtual buttons. All changes take effect instantly for easy comparisons, while exiting the edit mode automatically saves your preferences. It's very logically laid out and a doddle to use, ensuring the Lupe is an archival-quality phono amp fit for the 21st century!



**LEFT:** The 'wavy' alloy case is a Mola Mola hallmark, the porthole display another nautical reference showing input, gain, cartridge type and loading. The Lupe is best driven via its custom app [see below]

appear to be quite right, it's pretty much guaranteed that tweaks are needed. Fortunately, the extensive range of settings, with armchair access via the BT app, makes this easy.

By way of example, I discovered that my Denon DL-103 MC sounded both punchier and more detailed via a load resistance of 400ohm rather than the

lower 100ohm I had used in the past. With hindsight this makes sense as the DL-103 has a 40ohm impedance, but the subjective difference had never been so obvious prior to the arrival of the Lupe.

### WIDE OPEN

Once you've heeded the Lupe's subliminal messaging to get everything spot on, its performance is musical and hugely satisfying. Soundstage depth is positively cavernous, and it seems to effortlessly pull main performers forward of the loudspeakers. Jennifer Warnes was standing in the middle of my room declaring 'There ain't no cure for love' on her *Famous Blue Raincoat* LP [Impex Records IMP6021] – a solid and tight bassline underpinned this rendition, along with some authentically chewy and positive percussion.

Even when a bassline becomes more relaxed ↗



**ABOVE:** The three RCA inputs and one XLR (the latter only truly balanced with MCs) may be routed to entirely separate MM and MC phono amplifiers within. Outputs are directed via the app [see p69] through the RCA and/or XLR terminals

and languid, the Lupe steps right up. Steve Queralt's bass guitar, which kicks off the introduction to Ride's 'Birdman' [Creation Records CRE 155T], rumbled ominously through my loudspeakers, floor and sofa but without any hint of boom or wallow. And when the main action of the track began, the Lupe captured its impact and dynamics with ease.

Mola Mola's phono stage is equally generous with its detail and insight through the high treble, enhancing the timbre and crispness of percussion. On the other hand it'll not paper over the foibles of your favoured pick-ups. It revealed a subtle hint of graininess to the Cadenza Black's treble, despite firm cymbal strikes sounding strong and decaying with subtlety, just as delicately tapped hi-hats or more subtle background effects sounded a little flatter via the DL-103.

And perhaps these 'qualities' were all the more obvious thanks to the Lupe's uncannily quiet background.

Nevertheless, by throwing its windows open wide, the Lupe also draws the best that most MCs have to offer, in most cases developing a sound that's little short of dazzling. In addition to that glorious, deep, fulsome bass, there's a

welcoming and detailed midband. So the timbres of instruments are not only beautifully coloured, they are also realistically drawn. Therese Schroeder-Sheker's harp on 'Credo Of Ballymacoda' from the *Windham Hill Sampler '89* LP [Windham Hill 371082-1] was apparently in the centre of my listening room, with every string pluck sounding vivid and lifelike.

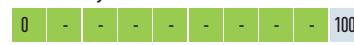
### LIVE AND KICKING

This depth of soundstage and sense of dynamic scale worked to create a palpable ambience, especially with live recordings. Swing Out Sister's rendition of 'Surrender', recorded at Camden's Jazz Café for the B-side of 'La La (Means I Love You)' [Mercury Records SWING 112], sounded magnificent. With eyes shut, I could easily imagine the typically dark atmosphere, and the sense of space around and between the players. A phono stage that transports you to the event – what more might the vinyl aficionado desire? Ⓜ

### HI-FI NEWS VERDICT

Mola Mola's Lupe could be the last phono stage you'll ever need. Compatible with the vast majority of both cartridges and recordings, there is very little that it won't handle. The BT control app is logical and easy to use, and the sound quality is absolutely first-class. If you're serious about your vinyl replay, then there are very few other MM/MC preamps offering this level of performance and flexibility at any price.

Sound Quality: 89%



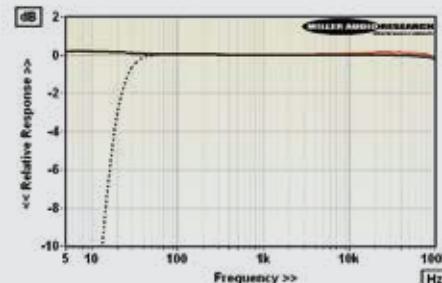
**LEFT:** Slim alloy remote may be programmed to suit all Mola Mola separates – including input, subsonic filter and mono mode for the Lupe

## LAB REPORT

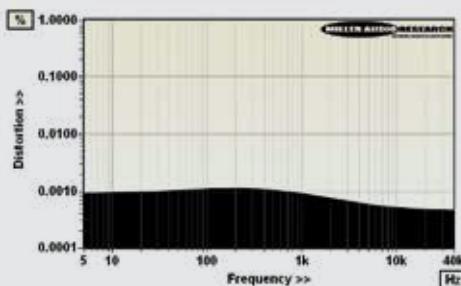
### MOLA MOLA LUPE

Tested via its balanced in/outs, the Lupe, via its app [see boxout, p69], allows for two MM gain settings of +45dB and +50dB plus a full eight options for MC. The latter +52dB, +57dB, +62dB, +67dB, +72dB, +77dB, +82dB and +87dB are accurate to within  $\pm 0.1$ dB and will accommodate MCs rated between 2.5mV re. 1kHz/5cm/sec (+52dB gain) and a vanishingly low 0.044mV (or 44 $\mu$ V at +87dB gain) to deliver 0dBV from the Lupe. In practice the middle +57dB to +72dB settings will be used for the vast majority of MC pick-ups assisted by the pre-programmed 60ohm-1kohm input loading options. Throughout this band the Lupe offers a state-of-the-art 85dB A-wtd S/N ratio (500 $\mu$ V in/0dBV out) but the fine-tuning for your MC will come in balancing sensitivity with available headroom. The Lupe's maximum 8.9V output is more than sufficient but with the high gain on offer it will clip with relatively low inputs – 23mV at +52dB gain, 4.0mV at +67dB gain and just 395 $\mu$ V at +87dB gain. To retain +20dB of headroom – a safe limit for the fiercest of grooves – the +62dB and +67dB settings will be your best choice with '0.5mV' MCs, leaving the high gain settings for lower o/p MCs, and vice-versa.

The Lupe's 'global' performance is equally on-point. The RIAA eq is accurate to within  $\pm 0.1$ dB from 20Hz-20kHz, and a super-flat  $\pm 0.25$ dB from 5Hz-100kHz [see Graph 1, below], while the subsonic filter [dashed trace] has a -3dB/20Hz turnover and very steep roll-off thereafter (-20dB/9Hz). Mola Mola also claims that distortion is 'not measurable' although this is true only so far as any distortion harmonics are buried beneath the (white) noise. Mola Mola's discrete op-amp modules are exceptionally linear so the very low 0.0004-0.0015% recorded here [see Graph 2] is, strictly speaking, a reflection of distortion+noise. PM



**ABOVE:** RIAA-corrected frequency response from 5Hz-100kHz (subsonic filter, dashed trace; balanced i/o)



**ABOVE:** Distortion versus frequency re. 0dBV from 5Hz-40kHz (MM +45dB gain setting, balanced o/p)

### HI-FI NEWS SPECIFICATIONS

<b>Input loading (MM/MC)</b>	18-120kohm/0.380pF / 60ohm-1kohm
<b>Input sensitivity (re. 0dBV)</b>	5.42mV-2.98mV / 2.51mV-44.1 $\mu$ V
<b>Input overload (re. 1% THD)</b>	48mV/28mV / 24mV-0.3mV
<b>Max. output (re. 1% THD) / Imp.</b>	8.9V / 22ohm (balanced)
<b>A-wtd S/N ratio (re. 0dBV)</b>	86.1dB / 84.1-85.1dB (MM/MC)
<b>Freq. resp. (20Hz-20kHz/100kHz)</b>	+0.15dB to +0.01dB / -0.2dB
<b>Distortion (20Hz-20kHz, re. 0dBV)</b>	0.0004-0.0015%
<b>Power consumption</b>	20W
<b>Dimensions (WHD) / Weight</b>	200x110x320mm / 5.1kg