australian
hi-fi
March/April 2014

KRIX HARMONIX MK2
Loudspeakers

MICROMEGA MYZIC
Headphone Amplifier

RICHTER SORCERER
Valve Amplifier

ARCAM FMJ A19
Integrated Amplifier

DEQX PREMATE
DSP Preamp/DAC

AVID INGENIUM
Turntable

ARMED & DANGEROUS

AVID'S INGENIOUS INGENIUM

+

CES SHOW REPORT

A$8.95 NZ$10.99 www.avtub.com.au
02
9 771442 125002

Micromega MyZic

HEADPHONE AMPLIFIER

If you're a small French hi-end hi-fi company, manufacturing your components entirely in France, you could be completely confident that the quality of your products would be right up there with the best in the world. But how could you possibly compete in terms of price with other European manufacturers that are having their products built in China? MicroMega's 'MyZic' range is its very clever solution. Although there are many different 'MyZic' components in MicroMega's range, they all share a common plastic case, and many internal components. It means that MicroMega can cut costs by using mass-production techniques, even though it's not actually 'mass-producing' a single product.

THE EQUIPMENT

As you can see from the photographs, no-one could accuse MicroMega of including superfluous controls on its MyZic Headphone amplifier. It has just a single, 'wheel-style' volume control, and that's it: no other controls. It's also sparse with the supply of inputs and outputs, with just a single 6.35mm phone socket on the front panel and, on the rear panel, a pair of gold-plated RCA inputs and a pair of gold-plated RCA outputs, plus a two-pin 'Figure-8' style 240V mains power socket.

It is interesting that the MyZic runs on 240V (actually, it'll run on any a.c. voltage from 85 volts right up to 265 volts, which is great if you travel a lot), because many similarly-priced headphone amplifiers are supplied with outboard plug-pack power supplies. The operational status of the MyZic is indicated by a small horizontal 'bar' underneath the MyZic logo on the front panel. This glows red when the MyZic is in standby mode and white when it's operating.

As to how the MyZic switches between 'standby' and 'operational', MicroMega has been clever with this as well. First, the unit looks at the headphone socket itself. Whenever it detects that a pair of headphones is plugged in, it will switch from standby to operational. And if you want it to switch to standby but you don't want to unplug your headphones, you just turn the volume control to minimum and it will switch to standby.

If you're wondering about that line output on the rear panel, it's just a loop from the input alongside, which means you don't 'use up' an output on your source device. Speaking of which, the impedance of the line input on the rear panel is around 1MΩ, so you won't load-down the source either.

IN USE AND LISTENING SESSIONS

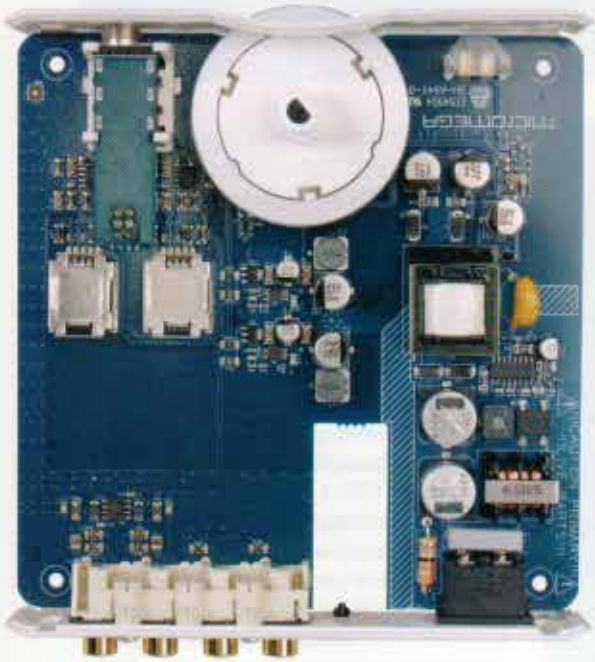
According to MicroMega, the MyZic '*matches with every headphone impedance and sensitivity*' which I assume is a translation error, since

it can't possibly be a perfect match for every pair of headphones on the planet. I suspect that what MicroMega really meant to say is that it has designed the MyZic's output impedance so it will satisfactorily drive the great majority of commonly-available headphones available on the market—most of which have nominal impedances ranging from around 16Ω or so up to around 600Ω—to good listening levels without distortion. Given the usual '1/8th' headphone impedance rule (which says that headphones work best when the output impedance of the source device is less than 1/8th the headphone impedance) this means that for 16Ω headphones, the output impedance should be less than 2Ω (16/8 = 2). [*In fact, Newport Test Labs measured the MicroMega MyZic's output impedance as being an order of magnitude better than even this, at 0.25Ω... Editor*].

The horizontal volume control works well (at least once you've discovered that moving it to the right increases volume, and *vice versa*... because there are no markings to indicate this) and has such a wide range that it's very easy to set your preferred volume level precisely. The only drawback is that moving the control from minimum to maximum requires five 'swipes' of the control since, unlike a conventional rotary volume control, you can move it only a limited distance at any one time. This makes it impossible to move the control from maximum to minimum quickly, but I can't see that this really matters because if you absolutely require an instantaneous reduction in volume level, the quickest thing to do would be remove your headphones!

In my session I trialled a large number of earphones and headphones, deliberately with a wide spread of nominal impedances and was most impressed by the performance of the MyZic with all of them. At no stage was there ever any lack of volume, so there's certainly sufficient drive, and I never heard any lack of extension— the MyZic is an extremely wideband headphone amp—so it will be the frequency response of your headphones themselves that will be the limiting factor for both the high-frequency and low-frequency extension you hear. Circuit noise was also very low. Even when listening at very high levels I found that when music wasn't playing, all I heard was complete silence. I was particularly impressed by this because this was despite the MyZic having an on-board switch-mode power supply. MicroMega obviously has designed this supply to be extremely quiet. The unit also comes out of standby mode quietly, without any circuit 'thump', so there's no danger of damaging your hearing if you do this while wearing headphones. Obviously the different headphones I trialled with the MicroMega sounded different to each other... as you'd expect, but as a general rule, I thought the higher-impedance headphones I used (models with impedances over 110Ω) sounded better on average with the MyZic than the models I used that had impedances in the 16–64Ω range. However, considering that the higher-impedance headphones I used were mostly much more expensive than the lower-impedance designs, this is hardly a surprising outcome!

The only thing I didn't particularly like about the MyZic was that the plastic (ABS) casing gives the component a rather 'light' feel. My feeling is that if MicroMega had put exactly the same circuit into a really heavy, solid metal case, I would have been happier. However, when you look at it, this is completely illogical, because there would be no difference in sound quality or performance, or even durability, because ABS is a tough material. And the fact that the MyZic is light means you can easily carry it around in a purse or briefcase and also that if you do so, its rounded edges won't damage anything else in the container... which can't be said of a sharp-edged metal casing... so plastic is probably the superior material for this particular application. (Incidentally, although the review unit was finished in white, an all-black casing is also available.)



One big advantage the MyZic has over most of its competitors is that it's more portable because of its on-board power supply, so if you regularly move your MyZic around, it's the only thing you'll have to worry about, whereas if you use a headphone amplifier with an outboard power supply (usually a wall plug) there's twice as much kit to carry around, and the possibility that the pins on the wall plug will damage other things you're carrying.

CONCLUSION

If you're after a good headphone amp, be sure and give MicroMega's MyZic a solid audition with your favourite 'cans'. I think that, like me, you will be very impressed. Outstanding sound quality, excellent build quality and truly moveable. ***Chris Croft***

MICROMEGA MYZIC
HEADPHONE AMPLIFIER

Brand: Micromega
Model: MyZic
Category: Headphone Amplifier
RRP: $360
Warranty: One Year
Distributor: Absolute Hi End
Address: PO Box 370 Ormond VIC 3204
(04) 8877 7999
info@absolutehiend.com
www.absolutehiend.com

- On-board power
- Lightweight
- Durable
- Great sound quality

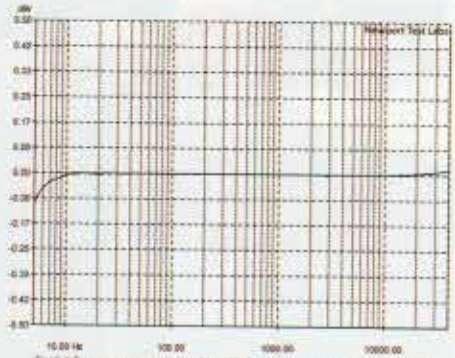
- Plastic case?
- Wheel volume control

LAB REPORT

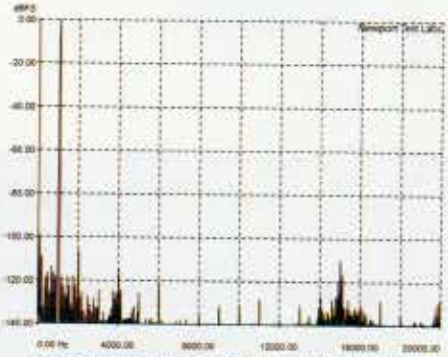
Readers interested in a full technical appraisal of the performance of the MicroMega MyZic Headphone Amplifier should continue on and read the LABORATORY REPORT published on page 114. Readers should note that the results mentioned in the report, tabulated in performance charts and/or displayed using graphs and/or photographs should be construed as applying only to the specific sample tested.

Lab Report on page 114

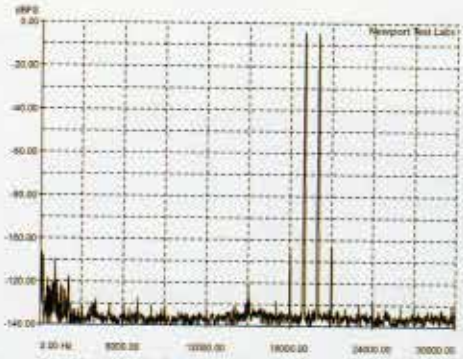
CONTINUED FROM PAGE 29



Graph 1: Frequency response at 1-volt into 32-ohms, Micromega MyZic Headphone Amp



Graph 2: Total harmonic distortion (THD) at 1kHz at an output of 1-volt into an 32-ohm load, referenced to 0dB. (MicroMega MyZic Headphone Amplifier)



Graph 3: Intermodulation distortion (CCIF-IMD) using test signals at 19kHz and 20kHz at an output of 1-volt into a 32-ohm load, referenced to 0dB. (MicroMega MyZic H/P Amp)

LABORATORY TEST RESULTS

The frequency response of the MyZic headphone amplifier is shown in Graph 1, and you don't need me to tell you that it's flat. Ultra-flat. From about 10Hz up to 10kHz you can't actually distinguish the frequency response trace from the graphing line at 0dB—and note that each vertical increment is just 0.08dB, with the top of the graph being at +0.5dB and the bottom at -0.5dB, so the scale magnification of this graph is enormous. The trace rises very slightly about 10kHz to be +0.02dB at 40kHz, so normalised, *Newport Test Labs* measured the MyZic's response as 10Hz to 40kHz ±0.01dB. It doesn't really get flatter than that...and even if it did, there would be absolutely no reason to do so! The upper and lower frequency limits shown are merely the graphing limits for this particular test. Using other instruments, *Newport Test Labs* explored even further up and down in frequency and discovered that the MyZic's response is 1dB down at 3Hz and 148kHz, so the overall response is 3Hz to 148kHz ±0.5dB.

Channel separation was excellent at low and midrange frequencies, with the lab measuring 98dB at 20Hz and 90dB at 1kHz, but separation diminished to 65dB at 20kHz. Although low by comparison with the other results, this last figure is 'way more than required to give perfect channel separation and stereo imaging. Channel balance was measured by *Newport Test Labs* as being 0.07dB, which is exceptionally good.

Distortion was extremely low, as you can see from Graph 2, with the second harmonic component being at –108dB (0.0003%), the third at –125dB (0.00005%), the fourth at -115dB (0.0001%), the fifth at –128dB (0.00003%). Other, higher-order components are visible above the noise floor, but they're all more than 120dB down. Indeed the only reason they are visible above the noise floor is because the noise floor itself is so amazingly low—above 6kHz, it's more than 140dB down. (Ignore the 'hash' up around 16kHz, which is spurious signal breakthrough, not the MyZic itself.) Even at low frequencies (see the extreme left of the graph) you can see that the mains-frequency noise is around 100dB down. Total THD+N was measured by *Newport Test Labs* at 0.001%.

Channel balance was measured by Newport Test Labs as being 0.07dB, which is exceptionally good.

Signal-to-noise ratio was measured at 96dB unweighted and 100dB A-weighted referenced to an 8.8V output into a 150Ω load. Output impedance was measured at just 0.25Ω, which means the MyZic will quite easily drive any headphones I have ever run across.

Power consumption was extremely low. When the MyZic is operating at maximum output it pulls only 2.58-watts from the 240V mains. When it's in standby mode, it draws exactly 0.12-watts.

Overall, a great set of results.

Steve Holding

Micromega MyZic Headphone Amplifier – Test Results

Test	Measured Result	Units/Comment
Frequency Response @ 1 volt o/p	3Hz – 148kHz -1dB	See Graph
Channel Separation (dB)	98dB / 90dB / 65dB	(20Hz / 1kHz / 20kHz)
Channel Balance	0.07	dB @ 1kHz
Gain	12.1dB	
Maximum Output Level	3.7V / 8.8V	32Ω / 150Ω load
THD+N	0.001%	@ 3V output
Signal-to-Noise Ratio	96dB / 100dB	unweighted/A-weighted
Output Impedance	0.25Ω	
Power Consumption	0.12 / 2.58	watts (Standby / On)
Mains Voltage Variation during Test	241 – 249	Minimum – Maximum