

# LAMPIZATOR

## The Vinyl Phono MC1 Phono Stage



# User Manual

**WARNING:** as every of our products comes with a 7 days testing period (please to confirm it - ask your dealer first), during this time it is not allowed to open the product. The screws are protected with a seal. You have to decide, if you like the sound and you want to keep it. After the 7 days period expire – your MC1 is a keeper, and you may open the hood. This does not invalidate the warranty, however – any modifications – no matter how small – invalidate the 5 years warranty. Changes, upgrades and mods must be pre-authorized in writing, even tube change. Products returned during the test period with the seal broken will not be refunded and will be sent back.

## THE SHORT MANUAL

1. Plug in
2. Wait 30s for the Nixie to come up
3. Enjoy

## Short description

Vinyl Phono MC1 was built on the basis of our 20 years experience with tube technology.

The success of Lampizator DACs was mainly due to our approach to the analog stage with tubes, backed by the tube power supplies, etc. Consequently, creating a tube Phono was only a matter of time.

As a result you get a reference performance of world class, fabulous sound.

Some main characteristics are:

Elegant timeless chassis and front panel - a classic Lampizator no-nonsense design.

Update path for owners - new features and specs

Trade-in path for bigger models, even after warranty

5 Years warranty

## Highlights:

- Fully tubed, 70dB Moving Coil Phono Stage
- Zero feedback, zero silicon design
- Phenomenally transparent and dynamic sound
- True analog sound from Lampizator - the tube expert
- All tube design of maximal purity
- Amorphous core SUT built in
- 5 impedance load settings - switchable
- Muting function
- TrueCopper Lampizator capacitors
- 4-layer, fully shielded PCB
- Nixie tube display
- Current monitoring needle meter

## From the designer

The Lampizator Vinyl Phono is a result of long research that we took regarding the feasibility of creating the no compromise Phonostage that is worthy of our reputation in DACs.

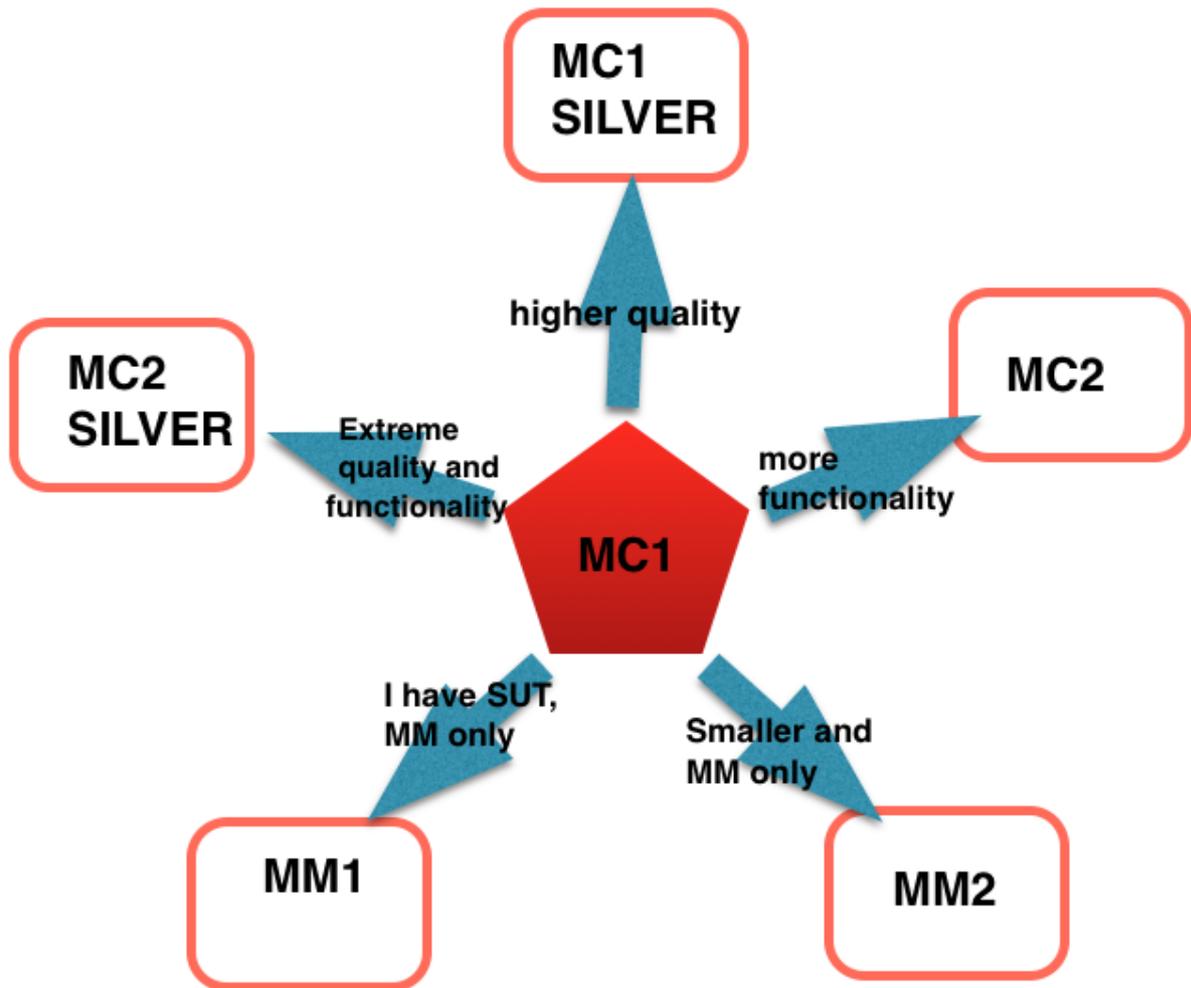
There were some basic criteria which we thought are important, namely:

- No silicon
- MC input, (no MM at all in this particular model)
- Tube rectified PSU
- Tube regulated PSU
- Tube stages for input and output
- No negative feedback
- Premium parts
- User switchable input loads for MC (low - normal - high)

- Big housing like the Big 7 DAC
- Finish Variants with Gold top, copper top, red paint top etc
- Concealed tubes
- Tube rolling possible
- Nixie display for 4 input loads and muting
- “volume” style knob for selector of loads
- Needle current meter

Why no MM input? Why the user can't use his own step up transformer?

Well, the complexity of our design is such, that the step up is entwined into the tube schematics, and can not be separated. They work together (transformer and tubes) so well, that separating them would be a crime and this marvelous Phono wouldn't be as good as it is. So - no matter what is your step up - the benefits of what I did are far greater than the benefit of an outboard step-up plus cables of course. This way my design is great, simple one box, no cable fuss, no compatibility issue, no risk of mis-match, and full control of how it sounds. And besides - we used the best step-up we could possibly find and we have tested many side by side.



## **Basic Specifications:**

Inputs: One stereo RCA input, with adjustable loadings

Outputs: One stereo RCA output with 2Kohm impedance

Amplification factor: Total of 3200x, (70 dB)

Catridge compatibility: Moving Coil MC only, from 0,15 mA.

Number of input load settings: 5

Output level on average music material: 2V pp

Output headroom: 10x

Power consumption: 20W

AC mains: 110/115/220/230V AC / 50 - 60Hz

Tube compliment: 2 x 6N2P-B, 2x ECC803-s-g, 1xEL34, 1X6X5, 1 x Nixie

Shelf footprint: 43x51 cm (W x D)

Total height clearance: 13 cm

Weight (net / shipping gross): 17 kg / 25 kg

Power supply: fully linear, 150 Watt, fully regulated for every consumption point.

Paid options: Copper top, NOS tubes.

## **OPTIONAL MODELS:**

MC1 only mc input, full tube PSU, Single ended outputs, one arm (6600 Euro plus VAT tax)

MM1 only mm input, full tube PSU, Single ended outputs, one arm (4600 Euro plus VAT tax)

MM2 only mm input, full solid state PSU, small box Single ended outputs, one arm (3900 Euro plus VAT tax)

MC1 Silver - Silver SUT version of MC1

MC2 : Three arm inputs version (2 x MC plus 1 x MM)

SUT-A - only the SUT to connect to an existing MM phono

SILVER SUT-A

MC2 Silver

## A quick guide to a smooth start

**VOLTAGE:** All Vinyl Phono MC1 are shipped with the voltage of MAINS according to the country of destination. If you bought the MC1 second hand and you are in different voltage zone - the product can be converted by switching the special switch at the back.

It is not necessary, but advisable that the power cable used is a quality one, not simply a computer cable. It is also advisable to use some kind of AC filter – in many cases this brings nice results. Generally under-filtering is better than over-filtering.

Due to multitude of AC plugs around the world - we dont supply any AC cable at all.



## Introduction

Thank you for choosing Lampizator Vinyl Phono MC1. We created it with huge research effort to deliver not only world class musical performance, rivalling the most expensive phonostages money can buy, but also to offer very long life of the product. Simply speaking – if you adhere to some basic precautions listed below – the product should last a lifetime and hopefully in this period – will never be outperformed by a competing product.

“Whose lifetime?” one might ask – well – let’s not go into details – enough to say it should work flawlessly for the foreseeable future.

The Vinyl Phono MC1 should be future-proof. Shall we ever launch a major upgrade to the electronic or mechanical part – you can get the upgrade at very reasonable cost. Shall you decide you need some added features – you can also get them at reasonable cost anytime in the future - any option you initially forgot.

We can’t be 100% sure, but it is extremely unlikely that the market and the industry in the future will embark any technology of music reproduction from Vinyl better than this. We already hit the human ear limits not to mention record groove limits.

## Cartridge types

We created this product with high end in mind, hence the compatibility with MM cartridges was entirely omitted, because it would compromise MC performance of this Phono, and we don’t want that. We are targetting the cartridges and systems where only top notch performance is expected, with adequately substantial dynamics, transparency, soundstage, tonality etc.

Having said that - at the moment of writing - we dont know of any cartridge type incompatible with our product. All kinds of load impedances, volumes, and sound signatures can be used.

If you are the person who has very unusual cartridge - we can adopt the Vinyl Phono MC1 to your needs individually, or we can refund you on the highly unusual case of incompatibility.

## Audio volume level and preamplifier

Tube technology allows us to set practically unlimited volume level at the output, up to 10 x higher than from a normal audio source. We have decided to adhere to one internally set standard: the test tone of 1 kHz at -20 dB produces an output of sine wave 300 mV AC under the amp load of 47K. That's equivalent of circa 3 V pp for 0dB of signal. Shall this be inconvenient for some reason – it is adjustable in the range of 0-6 V by just one resistor change. Generally - we prefer the sound of the source with high output levels, and most amps don't have any problem with that.

The Vinyl Phono MC1 is a **pre-preamplifier** and should be used with an integrated amp or active Line Stage Preamplifier. Lampizator Vinyl Phono MC1 **should not be** used with opamp based preamp, no matter how good. Not because something will happen, but because the op-amp feedback loops will remove the whole joy of music as delivered by the tubed Vinyl Phono MC1.

We recommend that the equipment that directly follows the Vinyl Phono MC1 in the chain (preamp, integrated amp) has input impedance of 47kOhms or higher. 20K seems like a healthy and sane minimum. In case of 10K it will still sound great, but not as great as in case of 47K.

The Vinyl Phono MC1 will not be damaged in any way, but at around 10K of load the dynamics of the phono will start to fade away.

Having said that - every properly designed amp or preamp keeps the load value above 40k. And if it doesn't - we simply don't choose such amp because it was not designed with audiophiles in mind.

## The heat issue

Many people are concerned about the heat inside the Vinyl Phono MC1 player.

We want you to relax about it - that this is NOT an issue. The preamp operates well below half of its maximum allowed temperature. Tubes are DESIGNED to be hot, this is their very nature. That's why they have internal heaters and when they are not at optimal operating temperature – they sound bad.

The other components are guaranteed up to 105C and we are expecting no more than 45 degrees Celsius in the air inside the Vinyl Phono MC1.

Our only advice is do not heat the box additionally by placing it - for example - on top of a hot class A amplifier. Give it some space around to allow free air flow and adequate cooling. Do not cover it with blankets or mats.

## Optimal placement

Apart from the heat issue as described above, the Vinyl Phono MC1 has no special placement requirements. Just remember to keep the RCA cable from the turntable not longer than 1,5 m (5 feet) and RCA preamp cables – not longer than that either. TT to phono cables MUST be shielded, the Phono to amplifier cables may not be shielded at all. Many extremely good IC cables are not shielded. Like Kimber for example.

**Since tubes are microphonic, they hate vibrations. Therefore it is forbidden to place the Vinyl Phono MC1 on top of the speakers or a sub. Choose least vibrating location, preferably at least one foot behind the plane of the speakers.**

## Power on-off cycle

The tube lifetime, almost like the life of a car engine in cold climate – is determined largely by the on-off cycle. The heat expansion coefficient of the glass is so much different than that of the metal, that the air-tight seal of the metal pins can leak oxygen inside the tube and eventually kill it. Even if it is just one molecule per day. So in other words it is better to keep the Vinyl Phono MC1 always on, than to switch it on and off **more than necessary**.

The lampizator Vinyl Phono MC1 with tube rectifier has a slow start feature which brings the high voltage supply gradually up, at the rate of two- to five volts per second. The PSU reaches 250 V DC after 90 seconds. This helps to extend tube life. The Vinyl Phono MC1 is also equipped with voltage down feature (bleeders) which reduce the power voltage drop upon switch-off at roughly the same rate.

**The display Nixie tube will come ON after circa 30 seconds, indicating the voltage has risen to 140VDC (and keeps growing to 205VDC) and the unit is ready to play.**

The tubes are operated always around 25% of full nominal power, which greatly increases their life expectancy. Combining all the factors together, the tube lifetime

Table 1

Vinyl Phono MC1	TUBE COMPLIMENT	equivalent
RECTIFIER	6C5S	6X5
VOLTAGE REGULATOR	EL34	KT66
INPUT	ECC803S	12AX7
OUTPUT	6N2P	Ecc88

should be anywhere between 10 and 40 years, assuming the player is switched off only once per day, for the night.

Additionally all our products have special heater circuits that slow down the inrush current by the factor of 10 and protect the heaters from developing spots and blemishes that cause metal erosion and eventually death (of the tube). Our circuit goes way beyond the tube datasheet recommended protection. It extends the tube life at least double versus the datasheet specs.

Frankly we expect all tubes except the rectifier to last a lifetime.

The rectifier should be changed every 5 to 10 years.

## Cabling and cable handling

Just to be sure that we know what we are doing:

- AC cable can be freely plugged and unplugged during operation. It is OK for the Vinyl Phono MC1.
- Output Signal cables can be plugged / unplugged with the amplifier volume turned fully down.
- Input Signal cables can be plugged / unplugged with the amplifier volume turned fully down or with MUTE function engaged (ZERO on the nixie)

Please use a decent AC cable. We suggest spending around 100-200 Euro for a good AC cable, not much more but not much less. The free AC “computer grade” cables are not good enough for serious audio.

Please use a decent interconnect. Best results are obtained with silver cables. Let your ears decide, not specs of the cable.

**Lampizators produces all types of cables for audio systems - you can order them from us with confidence of tremendous value for money. To beat our cables you need to spend 2000 Euro per one.**

## Tube rolling and replacement



We sell the Vinyl Phono MC1 with the best tubes we can find in consistent sustainable supply. Therefore we feel **you should not be tempted to change them** for any reason.

If you feel that you **MUST** try other tubes – we need to pre-authorize it in writing. Otherwise you lose the warranty.

### **Here are some practical tips for tube rolling (general note, not about MC1 tubes):**

1. Tube compatibility- many people ask “is the tube X compatible with Y?” and the answer is of course - it depends. Tubes can have completely different bases but be compatible by parameters and can be swapped by means of an adaptor. A good example are ECC40, and 6SN7GT - different bases but very close parameters. Or ECC88 and 6DJ8. Or 6H8C and 6N1P.
2. Other scenario is when the tubes have same base (say - noval) but they have different pinouts. So we **CAN NOT** inter-change the two tube types but we **CAN** use an adaptor. Same base type and same pinout **DOES NOT MEAN** that the tubes are

interchangeable - best example is cc81 and cc82 - same base, same exact pinout but completely different parameters. Or octal 6SN7 and VT99 - both octal, same parameters, different pinout.

3. Some tubes can have same base, same pinout and same parameters except the different heaters. Best example is ECC82 and 12BH7 - the former uses half heating of the latter. They can be used with a switch or within limited timing or with extra care, depending on the heater arrangement in our product. Another example are completely different tubes that miraculously are perfectly interchangeable - like E182CC with 5687.

We supply the tubes that are purchased new from reliable sources. They are tested and matched.

PLEASE VISIT OUR AFFILIATED SHOP FOR BEST TUBES: [WWW.BEST300B.COM](http://WWW.BEST300B.COM)

## Rectifier Rolling



Rectifiers are generally less rolled but many customers report that huge leaps in synergy can be achieved when, after choosing the optimal music tubes, we also choose optimal rectifier.

How can we tell the rectifiers ?

At Lampizator we use generally two sub-groups of rectifier diodes: directly heated and indirectly heated.

in Vinyl Phono MC1 we use **Indirectly heated diodes** are those which have separate heater coil mounted underneath the cathode. The heater current does not mix with the cathode current. This has several advantages (diodes are smaller, they live longer, they are much more vibration-resistant, and they can be connected in series with many tubes sharing one heater source. They have 5 active pins on an octal base. We use 6X5 (USA) or Soviet 6c5s (6u5C) type. They are very short bottles.

PINOUT: 2-7 is heater 6,3 V AC. Pin 8 is cathode.

Pins 3 and 5 are two anodes.

THIS IS THE TUBE WE USE IN Vinyl Phono MC1



To change music tubes you must switch off the amp. Vinyl Phono MC1 can continue to work. The rectifier can be changed safely DURING LISTENING without even turning down the volume.

## Ageing problems

As already explained above, the Vinyl Phono MC1 should age very very slowly.

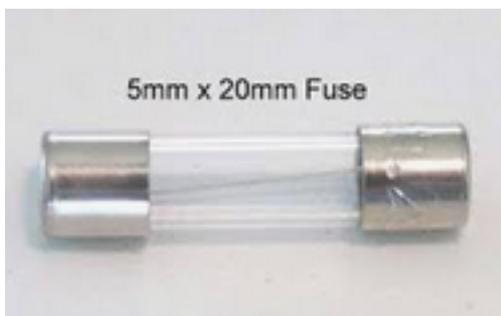
The PCB should last a lifetime. The transformer, the output caps, the cables, plugs, sockets – should last a lifetime. There are only 10 electrolyte caps which we selected from premium brands and they should last circa 25-30 years. Other than that we suggest to change tubes every 10 years.

So - short of a thunderstrike – we expect no failures or ageing problems before 20-30 years.

## Fuse Change

The Vinyl Phono MC1 is equipped with a non-repairable 20 mm glass fuse circuit breaker inside the IEC-AC socket at the back. There is also one spare fuse provided in the little drawer removable when changing the fuse. The fuses are 1,6A (or 2A for USA/Japan/Taiwan) they are slow blow, and overrated by the factor of 3. Therefore it is impossible for the fuse to blow without a specific reason - a failure inside the product. Consequently, if the fuse burns, it is a signal to send the Vinyl Phono MC1 for service and NOT change the fuse. Obviously the second fuse will burn as well.

WE ABSOLUTELY DO NOT ALLOW changing the fuses for any larger size than 2A or installing the “audiophile silver bolts” in place of the fuse. Fuses are there mainly to SAVE YOUR LIFE. And we mean that. You can experiment with audiophile grade fuses but not DEAD BOLTS please.



## I PLUGGED EVERYTHING BUT I GET NO SOUND

Quick check list:

Is the voltage at the back switch selected to your country?

Is AC power switch at the back thrown to ON and red lamp on the switch illuminated red?

Are analog RCA cables leading to the amp connected to OUTPUT sockets, and NOT the phono arm input sockets ?

Is the amplifier powered, connected, input selected correctly, un-muted, with speakers connected ?

Is the NIXIE display showing any number except 0 (which means muting)

Is the needle Amp Meter showing anything other than zero, but below say 30 mA ?

Do you see a tube glow inside the chassis ? (there are 6 tubes in total)



### The role of the needle meter

The needle meter monitors the total raw power current as seen by the PSU. It combines the power consumption of the 4 power tubes plus the voltage regulation tube.

The purpose of this cool feature is giving a very general troubleshooting tool, for diagnosing the possible issues.

After power ON, immediately the meter will illuminate, but show zero current. As the rectifier and other tubes warm up, they start conducting current. 30 s into the warmup, The needle will rapidly peak at around half of the scale (charging electrolytes) and slow down and retreat and settle at around 10 mA. Less than 7mA does not look right, more than 20 is unlikely, above 30 indicates something is off, above 50 is a definite failure requiring retubing or service.

If you remove the top, you can unplug the small four music tubes one by one and see if the big current rush disappears. Eventually unplug the biggest EL34 tube and see what the needle shows.

It is safe and OK to plug and unplug tubes providing that the amp is not connected or not plugged to power or off or turned down to zero. The best way is to do tube plugging and

unplugging and all measurements - with the NIXIE switched to 0. The player will be fully muted at its outputs.



## LISTENING TO THE MUSIC

some practical tips

Please use good shelf for the Vinyl Phono MC1. Do not place it on speakers, subs, or even on transports or amps. Again - tubes hate vibrations.

If you try the special devices for placement, we feel that: granite or marble is bad (ringing). Cones are just plain ridiculous and stupid. Cones are for uneducated people. Ceramic ball bearing feet are great. Good wood is great if thick. Others - please try.

The way stereo sound is created inside the Vinyl Phono MC1 can - under optimal condition - re-create the musical experience as it sounded live. It means that two speakers can cause us listeners to hear sounds everywhere around us, above, below, far in front, almost close to our face, and also behind us. This type of imaging is our goal. The sound must be able to get detached from the speakers (so called disappearing act) and the more our Vinyl Phono MC1 helps doing it - the higher we value it (and price accordingly). We voice our Vinyl Phono MC1 s to be as 3-D as possible with the beginning of that 3D as close to listener as possible.

From our experience speakers should be positioned following the basic rules of LampizatOr Nirvana Room:

1. Speakers and listener's head form unilateral triangle (3 x 60 degrees) with the distance between speakers being exactly equal to distance head-speaker.
2. Head must be in exactly middle of the speaker base and the speaker base must be exactly symmetrical versus side walls. We place speakers and measure the distance from side walls with 1 cm accuracy.
3. The distance of the speakers to the side walls and speakers to rear wall should not be equal. We recommend 1,4 times smaller or 1,4 times larger distance- but not equal. We measure that counting from the magnet of the bass driver.
4. Distance from rear wall of speaker and rear wall of the room should be no less than 0,5 m or 2 feet.
5. Ideally, the tweeter should be at the height of the ear or up to 10 cm higher, but nOT LOWER. Speakers with tweeters lower than 90 cm sound terribly wrong. In such event do everything you can to elevate the speaker by means of stands, bases or just cement block or at least lower the listening seat as much as possible.
6. The chair or sofa should not have the back support higher than the person's shoulders - in other words - should not be just behind the ears
7. Feet are the second ears of our body. They receive a lot of vibration stimulation and the brain combines this with the hearing. So we advise to have a piece of floor without any carpet directly where our feet are. Listening with feet (preferably bare)

on the hard floor greatly enhances our perception of music. It is advisable to have rug or carper between listener and speakers but not under the feet.

8. It is advisable to put something soft directly on the wall behind the speakers
9. The so called toe-in - the degree by which the speakers face the listener and not alongside the walls straight - is very critical. The rule of thumb is to toe in half way between standing straight and aiming at the listeners ear. Or slightly more straight, but not more towards the head. Over- toe-in kills the soundstage.

## **BURN IN PERIOD**

The Vinyl Phono MC1 comes straight from our factory after around 48 Hours of testing so it is not exactly “new” but it is **not burned-in enough**. Our customers report back, that after 3 days of constant powering (playing or not) the Vinyl Phono MC1 opens up significantly. Further improvements are observed after up to 7 days when things stabilise on a plateau.

Additional one day burn in is needed after every time the Vinyl Phono MC1: travels somewhere (vibrations), or is disconnected for over a month or is subject to cold temperature - like in the car trunk, when left overnight.

When the MC1 is fully burned in, the sound quality is stable, and we only need to warm it after powering every day.

The Vinyl Phono MC1 starts to play after 30 seconds.

The tubes reach full technical parameters and stabilise after 90 s. but that does not mean that the Vinyl Phono MC1 sounds it's best yet.

The whole system reaches operating sound quality plateau after circa 20 minutes and it is ready for serious listening.

**ENJOY YOUR MUSIC LIKE NEVER BEFORE !**

## FRONT PANEL AND FUNCTIONALITY



The front panel is equipped with two display elements:

Mili Amperemeter that shows the overall PSU current draw. It should read around 15 mA.

Indication of less than 10 or more than 20 mA is a sign of an internal problem and probably calls for a service .

The NIXIE display is a vacuum tube NOS display that shows the digits from 0 to 5.

These are readings of the input load of the cartridge.

0 = MUTE (for needle brushing or headshell change or something like that.)

1 to 5 are cartridge loads:

1= max load 1 k Ohm

2= 20 Ohms

3= 50 Ohms

4= 100 Ohms

5= 400 Ohms

We can install ANY value that the end user requires on position 5 - corresponding to personal preference or cartridge recommendations.

THESE RESISTORS ARE STRICTLY NON- USER-CHANGEABLE. There is no physical access to the resistors after the product is assembled in the factory.

Only factory is able to disassemble the Vinyl Phono MC1 to gain access to these points again. That's why there is a switch on the front to select the most popular loads.

The LOAD SETTING is NOT CRITICAL and will not cause any harm to the cartridge, the Vinyl Phono MC1 or the turntable or the preamp. The load causes MINISCULE variations in soundstage and trebles which are benign to our equipment and are only to please the ears.