A MATTER OF ADJUSTMENT

Nagra addresses analog purists with the pure MC preamp Compact Phono, reduced to the essentials. Is everything easy here then? Our review shows: The little that is there is all the more important.

Text: Matthias Böde

When unveiling its minimalist streaming bridge at the end of 2024 (review in STEREO 11/2024), Nagra already announced that it would soon be followed by a matching phono preamplifier. Following the "Streamer", the Compact Phono is thus now available from the company based at Romanel-sur-Lausanne on Lake Geneva. Its solid housing cover has been milled from a single block of aluminum, meaning that despite its small dimensions, the device weighs in at an unexpectedly high 1.9 kilograms.

You indeed have to look at the back to distinguish the two components from the Swiss manufacturer with the legendary Nimbus. Because both share more than just their size. As soon as you connect the external 12-volt switching power supply, which originates from medical technology and has been selected in hearing tests, a tiny yellow LED glowing through the flat front panel indicates that the device is ready for operation. There is no power switch.

Given the Compact Phono's negligible power consumption of less than 0.3 watts, the Swiss developers probably thought they could save on this without feeling guilty about the environment. They would rather keep the circuit stable under voltage. And rightly so!

There isn't much to discover: between the two pairs of RCA connectors for the inputs and outputs, there is a socket for a plug to adjust the input impedance. MC cartridges are known to be sensitive to this. And the Compact Phono is designed

TEST DEVICES

Turntable: Transrotor Rondino nero / Vision

Tonearms: SME Series V, Transrotor TRA 9

Phono Preamps: Nagra Classic Phono / VPS

Cartridges: Brinkmann Pi, Clearaudio Jubilee MC, EMT JSD Novel Titan G, Hana SL MKII, Transrotor Figaro / Merlo Reference

Pre / Power Amplifiers: Accustic Arts Preamp V / Amp VI, Nagra Jazz / MSA

Speakers: Gauder Akustik Elargo 200, Verity Audio Leonore

For detailed information on test devices scan the QR code.

exclusively for such cartridges. There is also a small toggle switch on the side that switches the preamplifier to "High" or "Low" mode.

This refers to the respective amplification factor, i.e. the extent to which the tiny voltages from the MC cartridges are boosted. In addition to the standard value of 62 decibels in the "High" position, the customer is offered an alternative of 47.5 decibels in the "Low" position. Anyone who thinks that this is a practical setting for the modest group of so-called high-output MCs is mistaken. This is because the Compact Phono is reserved exclusively for normal low-output models among moving coil cartridges.

In order to optimize the translation ratio between output voltage and gain factor, the majority of MC cartridges in this discipline, ranging from 0.25 to 0.5 millivolts (1 kHz, 5 cm/sec), run smoothly on the "high" setting. The vast majority of MC cartridges, such as those from Audio-Technica, Dynavector, Goldring, Hana, Lyra, Ortofon, Pro-Ject, and Skyanalog, fall into this category. In other words, almost everything that makes up the diverse range of products in this market segment.

Type-appropriate level adjustment

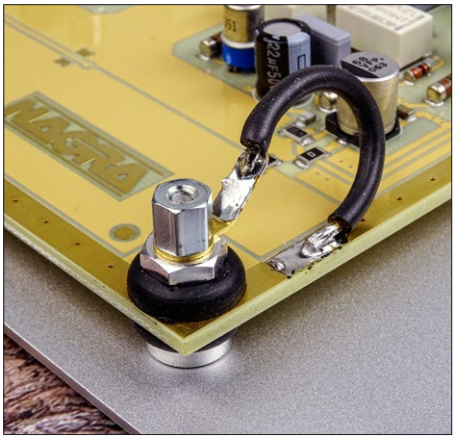
However, there are still some important and popular, albeit exotic, models that provide higher voltages at their connection pins without necessarily belonging to the high-output types, and which also rank among the "normal" models in terms of their termination impedance. For larger JSD EMTs, such as the Pure Black or the Novel Titan G, whose voltage values can reach 0.8 millivolts, or Brinkmann's current Pi, which even broke the one-millivolt mark in our measurements under the conditions mentioned, the "low" level is definitely appropriate.

Otherwise, during loud passages on the record, they will reach the Compact Phono's in this situation somewhat limited clipping threshold, which is not reached by the usual "quieter" MCs. At this point—connoisseurs will be reminded of Nagra's former tiny BPS phono amplifier, which was powered by a nine-volt battery—it is important to proceed with caution and expertise. If in doubt, your dealer will know the correct wiring.

The second point that requires attention is the ohm adjustment (see box) of the Compact Phono using the three-pin central contact for mini XLR plugs, which adjusts both channels at the same time. In addition to the default plug, which reduces the input impedance to the standard 100 ohms, the scope of delivery includes five others with in some cases significantly higher values. 100 ohms is considered a kind of "standard" because it is suitable for most Japanese MCs. Ortofon also follows this "reference value," which is accepted by many manufacturers of non-adjustable phono stages and reduces the risk of mismatching.

Experts know that the internal resistance often specified in the data sheet of an MC cartridge must be multiplied by ten in order to determine at least a base value for its termination impedance, which should not be undershot. However, this rule of thumb, which is fundamentally valid, does not always apply. For example, a high-priced Skyanalog we used has six ohms, so it should work fine with 100 ohms. However, it proved to be much better to follow the manufacturer's recommendation of a termination impedance between 220 and 470 ohms.

The lid milled from a solid aluminum block provides the Compact Phono with mechanical stability.



The circuit board is suspended among rubber buffers designed to dampen residual vibrations.

RESISTANCE!

Why does impedance determine an MC's sound?

While MM cartridges and high-output MC models with similar output voltages are running at the quasi-standardized 47-kilohm termination resistance the situation is less straightforward for normal low-output MC cartridges. These demand individual values based on their so-called internal resistance, usually ranging between 80 and 300 ohms.

The reason for this is that the coils of the MC cartridge have to be electrically damped in a specific way in order to optimize their resonance. This requires a minimum impedance that, according to the rule of thumb, is ten times higher than the internal resistance of the cartridge. This in turn is determined by the number of windings plus the thickness of the coil wire used. If this necessary input resistance is not reached, the playback becomes quieter, and the pickup tends to sound less dynamic, duller, and somehow "squashed." Higher values than the optimal ones are generally less critical, but they can lead to an emphasis of the upper frequencies and coloration in the sound.

To give owners of the Compact Phono the opportunity to experiment for themselves, rather than relying on manufacturer specifications or assumptions, the device comes with five alternative resistors in useful increments to the "standard" 100-ohm plug. After all, when in doubt, trial and error is the best way to learn...

A small box with five alternative resistors is included in the delivery.

So we switched to 270 ohms as an experiment. And lo and behold: the sound image dissolved much better, suddenly appearing more agile, more expansive, and more lively. A clear difference! Anyone who, assuming they were doing everything right, focused exclusively on the pure technical value would have significantly slowed down the spirit of their pickup in this case.

Practice makes perfect

The Nagra Compact Phono sounds – so much can already be revealed here – so delicate and transparent that a little experimentation is strongly recommended in this regard. Even Transrotor's fabulous Figaro, which otherwise always unleashes its potential at 100 ohms, opened up more, revealed its enthusiastic colors, and shimmered more seductively when the 180-ohm plug was inserted. When switched to 270 ohms, which had worked so well with the Skyanalog, it tended to exhibit certain inhomogeneities in the form of slight coloration in the upper midrange.

The more affordable, often underrated Merlo Reference from Transrotor, which once again impressed with its dry, sonorous, substantial yet delicate sound, reacted less noticeably to the ohm adjustment than the Figaro, but also gained a touch of agility and freshness at 180 ohms instead of 100 ohms.

More effective and even more sensitive than other high-quality phono preamplifiers – incidentally, the basic topology of all their phono preamps is based on the legendary microphone amplifier in the company's IV-S tape machine – the Compact Phono seems to achieve precise tuning of the pickup via resistance adjustment. This is probably also due to the fact that its crystal-clear, channel-separated equalizer gain branch has been kept as simple and at the same time sophisticated as possible, according to the Swiss manufacturer.

Photos: STEREO, Manufacturer

The back offers four RCA jacks firmly screwed to the solid chassis, a ground terminal, connections for power supply and matching plug, and the gain switch.

Nevertheless, it is equipped with two small gems in the form of encapsulated transformer transducers, for which Nagra is famous and which may only be wound by a small number of specially trained employees. They ensure the transformer-symmetrical decoupling of the MC cartridge by means of its galvanic isolation from the electronics, which prevents ground loops, for example, and also provide the first ten decibels of amplification. We know them from Nagra's VPS tube phono preamplifier.

And that's exactly what we had at our disposal alongside our other tools in this segment. A dead race, since the VPS, built from 2007 onwards, has been discontinued by now. But still quite enlightening as a benchmark. In fact, the tube preamp fell slightly behind the Compact Phono in terms of definition, which made every tiny detail audible with meticulous precision. The solid housing, which effectively suppresses any tendency to vibrate, certainly has a positive effect on this. And the remaining vibrations are probably absorbed by the tiny rubber buffers between which all four corners of the circuit board are clamped.

The Calm from the Aluminum Block

We didn't even notice the soft mandolin in Erlend Øye's subtly woven "Lockdown Blues" in the left channel via the VPS, for example. Of course, you can hear it through the VPS if you know it's there. But Nagra's flat phono preamp presents such details as if on a silver platter. But without holding a magnifying glass to it in a "listen to what I've got" attitude, so to speak. Rather, such little tricks appear in an aura of simple matter-of-factness. And the extremely high signal-to-noise ratios in both amplifiers ensure that not even the slightest tiny detail is lost in the noise.

Connect Nagras Compact Phono so that the electrical phase is on the right-hand side of the power supply socket, as otherwise the performance will lose some of its finesse. And leave it plugged in for two or three days! Of course, this little device sounds great from the very first minute. However, for the most subtle vibrations and perfect wholeness, the mid-format phono preamplifier needs some "warm-up time," although this term is to be understood figuratively, as the device, which is extremely economical in terms of power consumption, does not heat up—except for coherent musical references and highly decisive sound images from a sin-

The encapsulated transformers are at the beginning of the signal path and are a Nagra specialty.

Only specially trained Nagra staff are allowed to wind the highly sensitive transformer couplers.

gle mould.

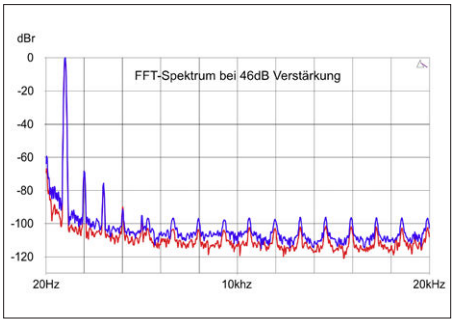
The compact Nagra meanwhile remains exemplarily neutral in terms of sound. Instead, it conveys the characteristics of the connected MC cartridges. Whether it's the energetic, brilliant diction of Brinkmann's Pi, the crisp, straightforward performance of the Clearaudio Jubilee MC, or the robust, gripping nature of an EMT JSD Novel Titan G – the Compact Phono not only conveyed these characteristics audibly, but also proved itself to be absolutely equal to the class of these MC luminaries.

Classic Phono as a Benchmark

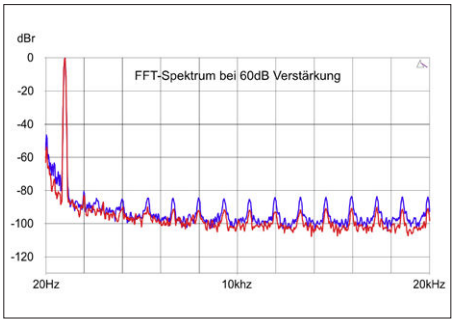
Of course, Nagras high-priced Classic Phono, which we have been using as a reference device since our review in STEREO 7/2021, delivers more musical flair, spatial expression, and overall high-end grandeur. However, the comparison with the Swiss manufacturer's big phono preamplifier, which costs around €22,000, underscored the high standard of the Compact Phono rather than its limitations. And if you own Nagra's MPS or Classic PSU power supplies, you can connect it to them using a special cable, which, according to the manufacturer, further enhances the sound performance. We are inclined to believe this, as it was the same with the Swiss company's streamer when we tested it.

So, there is more to it than meets the eye. Nevertheless, the approach towards the Compact Phono remains a matter of mentality and attitude. For its price, there are also phono preamplifiers with multiple inputs, MM compatibility, and who knows how many other features. However, this will hardly deter those interested in the little Nagra. These purist MC listeners generally know exactly what they want. ■

The external, low-interference 12-volt switching PSU was selected by after listening tests.



Depending on the set gain factor, the distortions are sometimes higher (r.)...



...and sometimes lower (l.), but overall remain negligibly low.

NAGRA COMPACT PHONO	
Product Type / Price Range	Phono Preamplifier / 2,000 to 5,000 Euros
Website	www.nagraaudio.com
Price in Euros	4,950
Dimensions (W x H x D) in cm / Weight in kg	18.5 x 4 x 17 / 1.9
German Distributor	Gaudios, www.gaudios.info
Phone	+43 3152 85779
SOUND 55 %	**very good 1.2**
Sound Quality	extremely natural, plastically three-dimensional, and detailed reproduction, fully doing justice to the level of top cartridges.
MEASUREMENTS 15 %	**good 1.7**
Signal-to-noise Ratio MM / MC (in Decibels)	very good (– / MC High / Low: 84 / 92)
Channel Separation at 1 kHz (in Decibels)	good (73)
Distortion Factor MM / MC (THD+N; in Percent)	satisfactory (– / MC High / Low: 0.18 / 0.1)
Clipping Protection MM / MC (Millivolts)	good (– / MC High / Low: 1.39 / 7.58)
Output Resistance (in Ohms)	good (152)
Max. Output Voltage MM / MC (in Volts)	good (– / MC High / Low: 1.59 / 1.54)
RIAA Diagram	very good
FFT Spectrum	very good
Power Consumption: Idle (in Watts)	<0.3
EQUIPMENT 15 %	**insufficient 5.2**
MM & MC present	only for low-output MCs
Inputs for multiple cartridges	no
Subsonic Filter	no
Mono Switch	no
Symmetrical Inputs	no
Remote Control	no
Haptics & Workmanship	very good
Hard Power Switch	no
HANDLING 15 %	**good 2.5**
Adjustment Convenience	good
Adaptability	very good
Quality of the Manual	only in English
Operation on Device / Display	very good
Warranty (in Years)	good (3)
STEREO TEST RESULT	**good 2.1**