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# GOLD NOTE PH-1000

## PHONO STAGE

**This stunningly high-end phono stage sounds wonderful and comes loaded with every feature and facility you're ever going to need. Plus it's also has pre-amplifier inputs and a headphone amplifier into the bargain...**

If you use a high-quality phono cartridge with your turntable, then a high-quality external phono stage is essential if you're to extract the best performance from it. The phono stages built into even the best high-end pre-amplifiers and integrated amplifiers simply won't do it justice, most particularly if yours has a moving coil.

Although there are many high-quality phono stages available, most of them are difficult and inconvenient to use, and don't offer the wide range of load, gain and filter options we'd expect to find in 2021. You kind of have to choose one that best matches the cartridge you're using... but then if you subsequently change to a different cartridge, your phono stage might not provide the correct load or gain, which would mean buying a whole new phono stage.

Which makes Gold Note's latest and greatest phono stage, the PH-1000, an absolute breath of fresh air. It has every phono load and

gain adjustment you'll ever need in order to correctly match any cartridge ever developed — or will be developed in the future — plus it has selectable (and adjustable!) RIAA filter curves, so you can correctly play back any LP ever pressed. It has loads of other features as well, almost too many to detail in this review, in fact!

Finally, unlike most phono stages, the PH-1000 looks beautiful, particularly when it's powered-up so you can see its fabulously informative and bright TFT multi-coloured controller panel.

### Equipment

Perhaps it is not so surprising that the Gold Note is beautiful, because it is designed and built in Italy, a country whose citizens have a track record for making beautiful objects, from the Mona Lisa to the Ferrari 488 Pista.

Italy also has a track record for functionality, and the Gold Note PH-1000 is certainly loaded

with that, because despite its flexibility and the number of options available, absolutely everything is controlled with just that single solitary rotary control you can see to the right of the TFT display. Gold Note calls this an 'SKC', short for Single Knob Control. It not only turns, but can be pushed inwards, which is the secret of its ability to multi-task. SKC might not be the most elegant of acronyms, but it describes the control perfectly.

It is essential to set the gain of any phono stage correctly in order to get the ideal signal-to-noise ratio from moving-coil and moving-magnet cartridges while at the same time not driving the phono stage into overload, and for this purpose you can adjust the otherwise fixed gain of the PH-1000 (which is 65dB on the moving-coil setting and 40dB on the moving-magnet setting) through six different gain levels: -9dB, -6dB -3dB, +3dB, +6dB, +9dB.

High-output cartridges would likely perform best at the -3dB setting, while low-output cartridges would most likely perform best at the +6dB setting, but it's nice to have that 3dB of extra gain available as an option in the form of the +9dB position. And of course there's also the 0dB setting, should the default gains of 40dB and 65dB be 'just right' for your particular system.

After properly matching the gain to best suit your cartridge, the next most important task of any phono stage is to ensure that it offers the correct impedance loading for the cartridge — at least it is for moving-coil



cartridges: moving-magnet cartridges require exactly 47kΩ. The Gold Note PH-1000 offers 12 load impedances: 10Ω, 22Ω, 47Ω, 100Ω, 220Ω, 470Ω, 1kΩ, 22kΩ, 33kΩ, 47kΩ and 100kΩ. This is notable for two low impedances that aren't usually available (10Ω and 22Ω) and also for offering three more than were available on the Gold Note PH-10 (which, at a mere \$2690, now becomes Gold Note's entry-level phono stage).

However, this isn't the end of the Gold Note's cartridge loading possibilities because you can use two of the PH-1000's line inputs to fit loading plugs, rather than use them as line inputs. This means that you can provide the exact loading for any phono cartridge that has ever been developed.

When you are using a moving-magnet cartridge, it's more important to match capacitance, and the PH-1000 offers you the choice of six pre-set capacitance values — 100pF, 150pF, 220pF, 330pF, 470pF, and 1000pF but, as noted in the previous paragraph, you can extend this by using your own load plug.

Although correct electrical matching is essential, the actual purpose of any phono stage — its *raison d'être*, if you like — is to 'correct' the frequency response of the signal your phono cartridge's stylus is extracting from the LP's groove. This comes about because in order to 'store' music on an LP the cutting engineer has to pre-attenuate the levels of the low frequencies, and pre-boost the level of the high frequencies. At the midway point (1kHz) there is no boost or cut. This is the 0dB point. As the music being recorded on the LP gets progressively lower in frequency, its level is progressively reduced until at 20Hz it is 19.3dB lower than the 0dB reference at 1kHz.

The opposite happens with frequencies above 1kHz. The higher the frequency of the music being recorded, the more the audio signal is boosted until, at 20kHz, it's boosted to +19.6dB. Because the levels of boost and cut applied are different for every different frequency, the overall effect is described as an 'equalisation curve', the most common of which is the RIAA curve, so-called because it was developed by the Record Industry Association of America.

So in order to ensure the correct response is sent to your main amplifier and then to your speakers, a phono stage must provide an 'inverse' RIAA curve to restore all the frequencies to their correct levels: for example boosting the bass at 20Hz by 19.3dB and cutting the treble at 20kHz by 19.6dB.

Before the RIAA introduced its equalisation curve, there were dozens of different curves in common use; indeed almost every different

record label had its own unique one. This meant consumers had to have a stash of compensatory 'curve plugs' and plug in the one specific to the LP they were playing, which meant lots of plug-changing. It was to stop all this confusion that the RIAA introduced its own standard in 1954, and required all industry members to use it. (The RIAA changed its own curve in the '70s to an 'enhanced' version, so there are actually two different versions of it, eRIAA and RIAA.)

If you buy a PH-1000 you'll be able to correctly play back every LP in existence, because in addition to providing both the RIAA equalisation curves, it offers more than 44 other equalisation options, including Capitol, Columbia/CBS, Deutsche Grammophon, Decca London, Epic, Mercury, RCA/Victor, Philips, Elektra, Parlophone, and L'Oiseau-Lyre, plus the ability to custom-tune any or all of them and/or create your own. We can't think of any other phono stage in the world that offers so many equalisation curves, and we can't think of a single one that offers owners the ability to 'tweak' the curve. This makes the Gold Note PH-1000 truly unique.

Rumble (unwanted low-frequency noise) used to be a huge problem when playing LPs, because of the poor tolerances of old platter bearings and noisy drive motors. Modern turntables suffer much less from this issue, but that said, unwanted low-frequency sounds are often found on an LP itself. Decca's London studio was so close to an underground tube line that many of its recordings contain railway noise.

Gold Note provides a solution to the problem in the form of a Rumble/Subsonic filter (the correct technical term for this filter is an infrasonic filter, not a 'subsonic' filter, and it would even more technically correct to call it a high-pass filter). This filter has a 3dB down-point at 10Hz, with a 36dB/octave slope. Unlike the Rumble filter on the lower PH-10, the one on the PH-1000 is switchable, as it should be. So if neither your turntable nor the LP being enjoyed have any low frequency noises you'd like to remove, you should leave the filter in the 'Off' position.

If you have a noisy LP you should also be able to reduce noise level by taking advantage of the Gold Note PH-1000's ability to be switched for mono operation, which will often reduce not only surface noise, but also the volume of any 'ticks' and 'pops' on it. In fact, not only can you switch the PH-1000 to mono, you can also invert channel phase (mono or stereo) or even swap channels. We're not entirely sure why you'd want to do this last, but if you want to, you can!

If you have more than one turntable, or your turntable has two or more tonearms, you're going to love Gold Note's PH-1000, because it has three phono inputs (two via RCA connectors, and one via an XLR connector) and two line-level inputs (one via RCA, the other via XLR). If you don't use one or both of these line-level inputs for additional cartridge loading, it means that you could plug in one or two line-level sources, which would enable the PH-1000 to be a pre-amplifier and/or headphone amplifier as well as a phono stage, thanks to it having both a volume control and a headphone output. (And if you'd prefer to control volume somewhere else in your system, the PH-1000's volume control can be bypassed.)

In many cultures, there's a belief that nothing made by man should be perfect (because only God is perfect), for which reason tiny yet deliberate imperfections can be found in cathedrals around the world, across all religions. This could be the reason the PH-1000 does not have a high-cut filter. Or not. But that could be easily fixed by a firmware upgrade. We'd also question the provision of an old-fashioned Mini-B connector for uploading firmware upgrades. We'd have preferred a Type-C connector, but this is no biggie.

## Performance

We have to admit we were quite excited by the Gold Note PH-1000 before we even played our first LP, because it's the very first time we have been able to provide absolutely exact load and gain settings for both our moving-magnet and moving-coil cartridges, and one of the very few times we've been able to have







both cartridges connected simultaneously, so we could do A-B comparisons on different versions of the same album and/or compare one phono cartridge to another. And, thanks to the PH-1000's headphone output, we could also listen to LPs via the shortest path possible.

When we finally did get around to playing our first LP, we became even more excited, because the sound quality was everything we could have hoped for, and more. If you want to extract the ultimate performance from all the albums in your collection, be they 45s, LPs or 78s — stereo or mono — the Gold Note PH-1000 is the perfect tool for the job.

Bass is incredibly deep and solid. Our standard for this has been, and no doubt will continue to be into the future, Telarc's version of Tchaikovsky's 1812 Overture with Erich Kunzel and the Cincinnati Symphony Orchestra. The sound of cannon-fire on this recording is — if replayed properly — absolutely amazing. It's no wonder that Telarc includes warnings that playing it too loudly could cause component damage. Just in case you didn't know, it wasn't only the cannons that were recorded separately and mixed in at the appropriate spots, but also the bells. Played back via the PH-1000, the sound was so realistically reproduced in our listening room that we flinched involuntarily when the first cannon fired.

To test the deepest bass out on something more musical than cannon-fire we switched to another favourite 'warhorse' in the shape of Don Dorsey's 'Bachbusters' on which he uses a wide array of synthesizers to play some of J.S. Bach's most popular works, all of which have deep bass. Again, the PH-1000 responded perfectly, allowing us to hear the various tonal qualities of the different synthesizers and settings he uses. For real authenticity (as in a real pipe organ) we took advantage of the PH-1000's mono setting to play one of our favourite recordings, Clarence Watters playing three of Cesar Franck's *Chorales* on the organ of Trinity College, which was recorded and pressed in mono. It's a beautiful-sounding

instrument and the beauty of its sound was realised perfectly by the Gold Note PH-1000.

We're huge Brian Eno fans, so the appearance of a Miles Showell 45-rpm half-speed mastered version of 'Music For Films' was a must-buy occasion and it has been entrancing us for some time, so when we listened using the PH-1000, and found that the subtleties of the improvements to the dynamics and the detailing were more clearly revealed than we'd ever heard before, we knew it was money well spent.

For voice, with Christmas coming up during the review period, we couldn't not play our Rhino version of Joni Mitchell's 'Blue'. It always sounds more authentic on vinyl than it does in any other format, and when we heard it via the PH-1000 it was so masterfully authentic that we took the opportunity to re-record a FLAC capture of it to replace our existing one. And not just 'Blue'. During the review process we did new rips of every single one of the LPs we played, and we hope to get through even more before Absolute Hi End requests the Gold Note be returned. The sound it delivers is just that gorgeous.

The high frequencies we tested with a wide range of recordings, but we kept coming back to Lubomyr Melnyk's 'Fallen Trees' with its hypnotic piano lines, ethereal voices and harmonic echoes. Curiously, our favourite track (*Barcarole*) is one of only two tracks that don't have the word 'Tree' in their title. We also kept coming back to the 2LP 'Joni 75' album that captures the 75th birthday tribute concert to Joni Mitchell by Diana Krall, Glen Hansard, Norah Jones, Rufus Wainwright, James Taylor and others. (If you buy this album, we'd recommend skipping past Kris Kristofferson's cover of *A Case of You*, but playing Krall's cover of *Amelia* over and over.)

### Conclusion

If you've been holding off on buying a phono stage to see if something incredible comes onto the market, you've hit the jackpot, because

Gold Note's PH-1000 is everything you've been waiting for and more. It is a truly incredible phono stage. We can still barely believe such an achievement was possible. This stunningly-good phono stage sounds wonderful and has every feature and facility you're ever going to need, plus it's also an extraordinary pre-amplifier

and an extraordinary headphone amplifier into the bargain. And if all this weren't enough, it is also completely upgradeable in terms of firmware and also hardware (two additional power supplies and two additional output stages are already available for it, plus we hear there are several firmware upgrades in the wings).

So what else can we say but 'simply superb'. We're giving it a 10 out of 10. 🏆

### GOLD NOTE PH-1000 PHONO STAGE

- Totally unique phono stage!
- Extraordinary flexibility
- Amazing sound
- No high-cut filter

**Price:** \$16,000

**Frequency response:** 20Hz–20kHz (±0.3dB)

**THD:** <0.01%

**S/N ratio:** 100dB

**Dynamic range:** 110dB

**Output impedance:** 50Ω

**Subsonic filter:** 10Hz (36dB/octave)

**Inputs:** 3 × phono, 2 × line

**Outputs:** 2 × line, 1 × tube, 1 × headphone

**Load impedance options:** 100kΩ, 75kΩ, 47kΩ, 33kΩ, 22kΩ, 1kΩ, 470Ω, 220Ω, 100Ω, 47Ω, 22Ω, 10Ω

**Load capacitance options (mm):** 100pF, 150pF, 220pF, 330pF, 470pF, 1000pF

**MC gain:** 65dB

**MM gain:** 40dB

**Gain adjustments:** -9dB, -6dB, -3dB, 0dB, +3dB, +6dB, +9dB

**Finishes:** Black, silver and gold (brushed aluminium)

**Dimensions (whd):** 430 × 125 × 375mm

**Weight:** 12kg

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