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Gold Note PH-10
Phono Preamplifier

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GOLD NOTE PH-10

PHONO STAGE

With typical Italian exuberance Gold Note proclaims its new PH-10 to be *'the most innovative phono pre-amplifier today'*. I don't know about that, but certainly it's the most colourful phono preamplifier today, as it's available not only in black and silver brushed anodised aluminium finishes, but also in gold and red-coloured anodised aluminium finishes.

THE EQUIPMENT

Gold Note certainly has a claim to being innovative. Whereas almost all the phono stages I am aware of that are currently on the market require you to move multiple tiny DIP switches from one setting to another, or insert wire links into sockets, in order to adjust phono stage gain and impedance—sometimes even requiring you to remove the cover and access the innards in order to make these changes—every single available adjustment on the Gold Note PH-10 can be made from the front panel, using the single click-stop rotary control located thereon. (It's this single knob that gives rise to Gold Note's so-called 'SKC' feature, which is nothing more than the first letters of the words 'Single Knob Control, and means only that you can control all the PH-10's functions with just the one knob.)

Gain setting is important in order that you can get the correct signal-to-noise ratio from moving-coil and moving-magnet cartridges without running the phono stage into overload, and for this purpose you can adjust the otherwise fixed gain of the PH-10 (which is 65dB on the moving-coil setting and 45dB on the moving-magnet setting) through three different stages of gain: –3dB, +3dB, and +6dB. High-output cartridges would likely perform best at the –3dB setting, while low-output cartridges would most likely perform best at the +6dB setting.

After properly matching the gain of a phono stage to best-suit your cartridge, the next most-important task is to ensure the phono stage offers the correct resistive loading for it. The Gold Note PH-10 offers nine load resistances: 10Ω, 22Ω, 47Ω, 100Ω, 220Ω, 470Ω, 1kΩ, 22kΩ, and 47kΩ. Although this is notable for offering two low settings that aren't usually available (10Ω and 22Ω) it falls short of offering the same number of settings that are available on some other phono preamplifiers, notably Manley's Chinook, which offers 32 of them.

Apart from amplification, the most important duty of a phono preamplifier (and the one that most distinguishes it from any other

type of amplifier) is that it must apply equalisation to the audio signal. This is because before any LP is recorded, the low frequencies are reduced (to enable longer playing time) and the high frequencies boosted (to reduce surface noise), so it's necessary that the opposite actions take place when the LP is played back in order to deliver a flat frequency response. The most common form of this type of equalisation is 'RIAA equalisation', so-called because it was developed by the Record Industry Association of America.

Absolutely the coolest feature of the Gold Note PH-10 is its multi-coloured TFT front-panel display...

But there are many other equalisation curves. In fact, before the RIAA introduced its equalisation curve, there were dozens of different curves; indeed almost every different record label had its own unique curve. 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 equalisation standard, and required all industry members to use it.

So, hardly surprisingly, the PH-10 offers RIAA equalisation. However, it also offers two other types: 'Decca/London' and 'America/Columbia', as well as three more curves that it calls 'enhanced' versions of these three, so six curves in all. Not bad when you consider that the D'Agostino Momentum phono stage—which retails for around $50,000—only offers five of them. Curiously—and I think a bit short-sightedly—the PH-10 does not offer any choices for capacitance loading, and this in a market where most other phono preamplifiers offer at least three or four different capacitance settings, and at least one offers no fewer than 16… but yes, it's the Momentum again that sets the bar so high.

Gold Note has been very clever when it comes to The PH-10's input stage, because it has two completely separate phono inputs, each of which can be set with different gain and load settings. This makes it super-easy to run a system with two turntables, or with one turntable that's fitted with two arms, each with its own cartridge.

The PH-10 also has a 'rumble filter', which these days is more usually called a high-pass filter. Rumble filters are important because one problem with RIAA equalisation is that it has an unwanted side-effect: namely that it boosts the level of any low-frequency noise coming from your turntable's main platter bearing, or from the platter's drive motor. The only issue I had with the rumble filter's implementation on the PH-10 was that I couldn't see any way to turn it off. The problem being that while a rumble filter can improve the sound from a low-quality turntable, if you own a modern turntable with, say, a noiseless magnetic bearing and a de-coupled motor, there won't be any rumble to remove, so the rumble filter will instead potentially be removing any extreme low-frequencies that might be recorded on the LP. Maybe this is something Gold Note could look into with a software update (about which more later).

Absolutely the coolest feature of the Gold Note PH-10 is that everything you need to know about it is shown simultaneously on the TFT multi-coloured front-panel display, which is 60mm wide and 45mm high.

Gold Note says the chassis of the PH-10 is '*machined from a solid block of aluminium*' but it looked to me more like it's an aluminium extrusion, so I suspect Google translate has done its usual inadequate job of translating from Italian to English. It's certainly a very handsome extrusion and it certainly *has* been machined, because there are diagonal ventilation slots in the top, bottom and sides of the chassis: So many slots, in fact, that their purpose is very evidently mostly cosmetic, rather than essentially practical. The problem with this is that if your home is anything like mine, those slots are going to let a lot of dust inside and, just maybe, the odd critter seeking a warm dark place to rest its head.

The rear of the PH-10 has two pairs of gold-plated RCA phono inputs, and they're ones of extremely high-quality. Alongside

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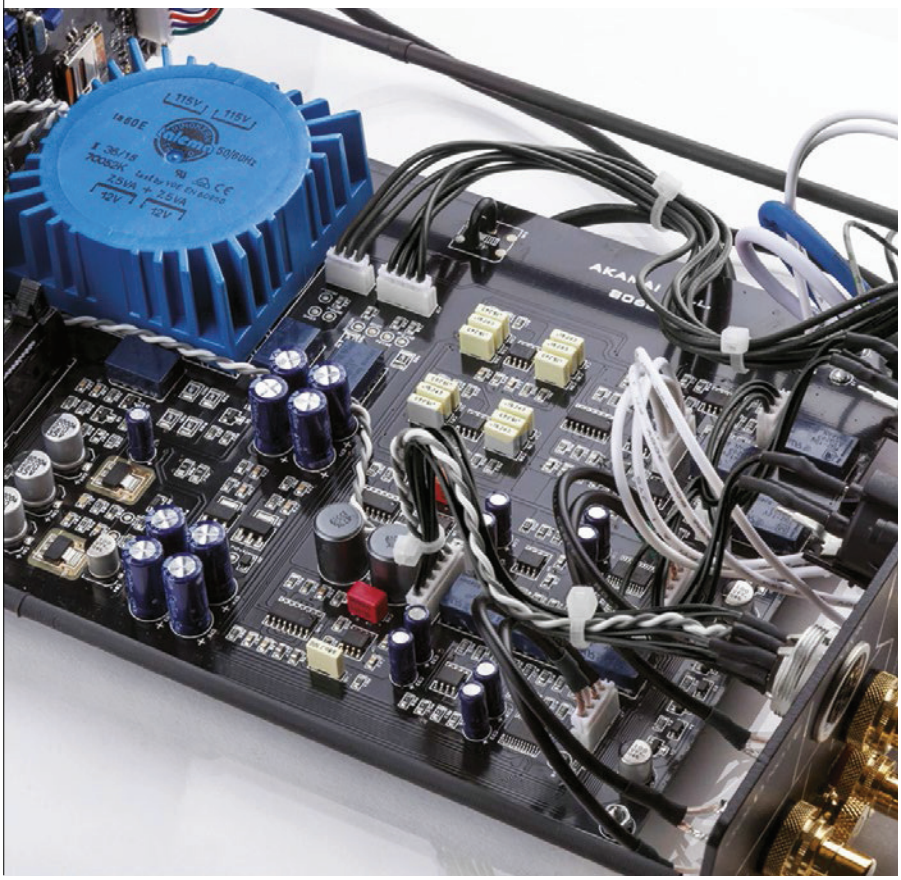

each is an earth binding post. If you use both inputs, you may find you may have to earth only one of the two to avoid mains hum. There are two line outputs; one is unbalanced and uses the same style RCA connectors as the phono inputs; the other is balanced, via gold-plated XLRs. There are also two multi-pin sockets. One is labelled 'PSU' and is intended to connect to a Gold Note external power supply, called a 'Dual-Mono External Inductive Power Supply' that will not be available until later this year. The other is labelled 'GN Port' and is intended to be connected either to a Gold Note external Class-A valve output stage or to its 'Curve Equalizer Extender Unit'. The external Curve Equaliser will allow you to access 35 additional phono equalisation curves, but it won't be available until mid-2018. As for the optional external valve output stage, Gold Note could not provide us with even an estimate of an on-sale date. Also on the rear panel is a USB port that Gold Note says can be used: '*to update the unit via computer anytime new software is available.*'

The PH-10 is moderately large (it measures 220×80×260mm WHD) and its power consumption is quite high at 30-watts—at least it's high considering that it's a phono preamplifier. It weighs 4 kilograms. My unit came with only one mains power lead, and it was a European one, unsuitable for use in Australia, partly for having the wrong pins, but also because the pins weren't properly insulated. Presumably an oversight, but if it happens to you, ask your dealer to supply an approved Australian 240V power cord, one with correctly insulated pins.

IN USE AND LISTENING SESSIONS

The Gold Note PH-10 is an absolute delight to use. It's so easy and intuitive to use, in fact, that you won't need to refer to the instruction manual at all other than, perhaps, to learn how to switch it on, which requires you to turn on the main power switch at the rear (it uses American-style orientation, so pressing the top of the switch inwards is 'on') after which you then have to press and hold the front panel control for three seconds, after which the unit will power-up.

Upon power-up, the PH-10 always defaults to the last selected input, which is shown in the top left of the display as either IN1 or IN2, around which will be a small white rectangle, to show you that this is the feature currently being controlled. To change from IN1 to IN2, you simply press the front panel control, after which the rectangle changes colour from white to red, then turn the control to change to IN2, and press it again to 'fix' this setting, after which the rectangle reverts to being white. If you rotate the control to the right while the rectangle is white, it will cycle through the available functions in the order MM/MC – Gain – Equalisation – Load Resistance – Display. This last allows you to choose whether the TFT display remains on all the time, or remains off and switches on briefly only when you move the front panel control.

I was absolutely knocked out by the Gold Note PH-10. It's simply superb in every respect...

I really liked the fact that the PH-10 shows an actual equalisation curve in the front panel TFT display, and that the curve's shape changes whenever you switch from one equalisation option to another. Sweet!

As for the sound quality of the Gold Note PH-10, well I said earlier that the Gold Note PH-10 was an absolute delight to use, and am happy to be able to report that it's even more delightful to listen to… in fact it was a pure joy to listen to my favourite albums and in many cases rediscover them, such was the high standard of the sound it extracted from the vinyl.

I also found I truly appreciated having the six different equalisation options, despite the fact that I am fairly certain that every single LP in my collection was recorded using standard RIAA equalisation. The reason for my appreciation was that I found that I could use the PH-10's equalisation to reduce the surface noise on some of my noisier LPs, boost the high-frequencies on the older ones that have been played so often that the highs have been reduced in level, and I could even add a little more crispness to the sound of LPs that had previously sounded a little 'dead' in the midrange. I guess you could also do this if your main amplifier has bass, midrange and treble controls, but mine certainly doesn't.

I was absolutely captivated by the way the PH-10 reproduced the sound from a brand-new LP I purchased to supplement the version I already have on CD, that album being Dire Straits' 'Love Over Gold'. I could hear the superiority of the LP sound right from the outset of the lead-in track *Telegraph Road*. First, there was total silence, and then there was the single, eerie sound of a that synth note, soon joined by another… and all the while the silence sat ominously below. The Gold Note delivered all these sounds with unbelievable accuracy, but it wasn't the accuracy that impressed me so much as the fact that the PH-10 revealed the underlying emotion of the music—the hairs were standing up on the back of my neck… and I don't mean this figuratively, but literally!

Then, in the background of the track, down deep, the low-frequency machine hum comes in, introducing an even-greater sense of foreboding. I have never heard this slow-burn intro sound better, so by the time the single bass guitar note sounds, signalling the introduction of the percussion, my tension was almost electric. The PH-10 delivered Knopfler's raspy, gravelly voice to perfection, as it did also the unique sound of his guitar. The sonic complexities on this track are extraordinary, and they were all detailed beautifully by the Gold Note… nothing missing, nothing glossed over, and all strands kept distinct with no smearing.

CONTACT DETAILS

Brand: Gold Note
Model: PH-10
RRP: $2,290
Warranty: One Year
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E: info@absolutehiend.com
W: www.absolutehiend.com

⊕
- Wow factor
- Ergonomics
- Sound quality
- Flexibility

⊖
- Capacitance options
- Equalisation options
- Rumble filter

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The stereo imaging—and separation—was almost tangible. 'Magnifico!', as the Italians would likely say. When the track ended, I had to leap up and re-position the stylus at the start of the track just to experience the whole thing all over again, despite the potential for heating the vinyl (though on a 180-gram pressing I doubt this would happen!).

When I finally got to listen to the second track, *Private Investigations*, the clarity of the echoed spoken vocal was clearer than I've ever heard, despite the sibilances. Again the PH-10 delivered the emotion underlying the music, which is one of overwhelming sadness. The heartbeat 'thump' of the bass guitar and the slight time delays were also crystal-clear. I was so entranced by the sound that at the end of the track I was in such a reverie that I almost forgot to get up and move the tonearm to skip over *Industrial Disease*, which is probably my least-favourite Dire Straits track (I have no idea how it managed to break into Billboard's top ten when it was first released.)

The track skip, of course, as fans will know, meant I was then listening to the title track, *Love Over Gold*, with its delicate keyboard/guitar entry. I am a huge admirer of this song for many reasons. First and foremost, the lyric, which is sheer poetry, but also the way the music is so elegantly constructed, so that it's absolutely classical in its arrangement and execution. The depth of the sonic landscape is important in this song, and once again the Gold Note PH-10 delivered it impeccably. For me, that was the end of the album, because *It Never Rains* has never grabbed me, and a few seconds of listening was enough to prove to me that even the undeniable talents of the PH-10 could not turn dross into gold.

CONCLUSION

As you've no doubt gathered, I was absolutely knocked out by the Gold Note PH-10. It's simply superb in every respect. And it's not just the sound quality, it's the user interface, the facilities, the 'Made in Italy' build quality… the whole package. But perhaps what I like the best about Gold Note's PH-10 is what it doesn't have, which is a high-end price tag. *Dean Shopes*

Readers interested in a full technical appraisal of the performance of the Gold Note PH-10 Phono Preamplifier should continue on and read the LABORATORY REPORT published on the following pages.

LABORATORY TEST REPORT

Graph 1 shows the differences in the equalisation curves applied to the input signal for both RIAA and Decca/London curves. The standard RIAA curve is plotted in black, the enhanced version in blue. You can see that both are identical up to around 4kHz, where the enhanced version is lifted so that at 40kHz it's around 8dB higher than the standard RIAA curve. The standard Decca/London curve is shown as the green curve, with the enhanced version shown as the blue curve. You can see that the standard Decca/London is identical to the standard RIAA up to around 1.5kHz, at which point it's boosted above the RIAA curve by 2–3dB out to 40kHz.

It's important to note that in Graph 1 and in Graph 4, *Newport Test Labs* has normalised the level of the signal at 1kHz so that the curves can be more easily compared. This is because the gain applied to each curve is different, so that if you use either of the America/Columbia curves you'll find that not only is the high-frequency response different to the other four curves, but also that the level will be much lower. *Newport Test Labs* measured the Gold Note PH-10's frequency response only across the audio band: it was 20Hz to 20kHz ±1dB, with the ±1dB variation due only to the presence of the filter (see next paragraph). The response from 30Hz to 20kHz was ruler-flat, varying by less than ±0.1dB.

Graph 2 shows the effect of the high-pass filter on the response. So whereas without a filter, the level of the low frequency response at 20Hz would have been the same as it is at 30Hz, you can see that Gold Note's filter rolls off the low-frequency response at 30Hz so that it's about 2dB down at 20Hz, then 18dB down at 10Hz, which is a slope of 18dB per octave. This would certainly remove any rumble effects from a turntable, and it would also help in removing any effects of tonearm/cartridge resonance.

Total harmonic distortion and noise is shown in Graph 3 for a 1kHz test signal. It's difficult to see, but there's a second harmonic distortion component at –100dB (0.001% THD) and a third harmonic at –110dB (0.0003% THD). This is an excellent result for a phono preamplifier. The noise floor reflects the low signal levels, given that the 0dB point

Gold Note PH-10 Phono Pre-Amplifier – Laboratory Test Results

Test	Measured Result	Units/Comment
Frequency Response @ 1 volt o/p	30Hz – 20kHz ±0.1dB*	(*See copy)
Channel Separation (dB)	76dB / 80dB / 70dB	(16Hz / 1kHz / 20kHz)
Channel Balance	0.03	dB @ 1kHz
Interchannel Phase	2.2 / 0.38 / 0.72	degrees (20Hz / 1kHz / 20kHz)
THD+N	0.04%	@ 1-volt output
S/N Ratio (MM) (unwghted/A-wghted)	53dB / 70dB	dB re 10mV input
Input Sensitivity (MM)	3mV	for 1.5V output (0dB gain setting)
Input Sensitivity (MC)	250µV	For 1.5V output (0dB gain setting)
Gain	60.3dB (MM)/75.4dB (MC)	
Ouput Impedance	526	ohms at 1kHz
Power Consumption	0.59 / 4.47	watts (Standby / On)
Mains Voltage Variation during Test	234 – 251	Minimum – Maximum

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