

Golden Age Premier Pre-73 & PreQ-73

Microphone Preamplifiers & Equalisers



Golden Age's new Premier brand takes their popular Pre-73 preamps to the next level.

HUGH ROBJOHNS

Swedish manufacturers Golden Age Project have made a name for themselves with their excellent Pre-73 range of preamps, all based on the famous Neve 1073 input module. We've reviewed various iterations of them in the past, including the original Pre-73 in March 2009, and the DLX version in March 2013. However, the latest incarnation of this highly-regarded and attractively-priced vintage-style preamp looks and feels rather different, and forms part of the range of the newer and more upmarket sister brand Golden Age Premier. There are two initial models, one incorporating a three-band equaliser (the PreQ-73 Premier), and one without (the Pre-73 Premier), although the latter does still have some useful basic EQ facilities. Although very similar in concept

and design to the current Golden Age Project Pre-73 MkIII and PreQ-73 preamps, the new Premier versions have been enhanced to provide a more 'premium quality' product. (In fact, the Project version of the PreQ-73 is being withdrawn.)

Still housed in a half-rack width 1U chassis (a dedicated 'Unite' shelf unit is available for rackmounting single or pairs of preamps), the most obvious visible change is an aesthetic makeover which emphasises the derivation from Neve's 1073 module, featuring the traditional grey-painted front panel, red-winged gain switch, fluted output fader knob, and a quartet grouping of white rectangular input configuration buttons.

Internally, the most significant differences are that Carnhill input and output transformers are now fitted as standard, and almost all the internal connectors between circuit boards have been replaced with

direct hand-wiring (only the gain switch is still hooked up via a connector, and that's to allow it to be pre-wired for production efficiency and easier field replacement). Company owner Bo Medin says this constructional change removes 48 separate signal-path contacts (compared with the transformer-equipped Project Pre73-MkIII Plus model), and that has to be a good thing from the perspectives of both sound quality and service reliability. The trade-off, of course, is a more demanding and lengthy build, which inevitably adds slightly to the production costs.

The vintage-style buttons, knobs and transformers add to the unit costs as well, of course, but the modestly increased sale price of this new premium range has also allowed Bo to use higher-quality components throughout these new models, including polystyrene and tantalum

capacitors in the gain-stages, and the internal 24V DC regulator has twice the reservoir capacity of the Project models. That internal DC power regulator is provided with 24V AC from an external double-insulated (groundless) 'line-lump' mains transformer via a coaxial power socket. It makes perfect engineering sense to keep the mains transformer as far away from the unit's magnetically-sensitive audio transformers as possible, though I was surprised that the opportunity was not taken in this Premier range to upgrade the power connector with a higher-quality locking type — something Bo tells me he'll consider for future revisions. On a technical note, it's probably worth stating that, as a Class-2 device, the Pre-73 Premier relies on being grounded (for electrical screening purposes) via its audio socket connections.

Like previous Pre-73 models, the audio circuitry is based very closely on the Neve 1073 design, using transformer-coupled inputs and outputs, with multiple discrete, three-transistor, Class-A gain-stages all running on a single-sided 24V power rail. The chunky Carnhill VTB 2514 output transformer is driven by a distinctively beefy 2N3055 power-transistor, and conventional through-hole components are employed

everywhere — the only 'chips' inside the box are a LM317 power-rail regulator, and a LM339 quad comparator in the metering circuitry. An internal 1A slow-blow DC input fuse is provided to protect the power regulator board, but although its presence is mentioned in the glossy A4 sheet that serves as a user manual, there are no markings on the case.

Pre-73 Premier

Functionally, the Pre-73 Premier model is *almost* identical to the Project Pre-73 MkIII. A balanced mic or line input can be connected via the single rear-panel 'combi' XLR, and an instrument input via the front-panel quarter-inch TS socket. The elegant quartet of buttons on the front panel selects the input format (for the line or DI sources instead of mic), as well as engaging 48V phantom power (with a red status LED), and a low-impedance mic input mode, which reconfigures the input transformer's primary windings to present a 300 Ω impedance instead of 1.2k Ω . This low-Z mode usually alters the tonal characteristics of (passive) dynamic mics (and some transformer-coupled capacitor mics) which can be musically useful.

Compared with the original Neve (and other Golden Age) preamps, the rotary gain switch is simpler, with just 11 positions to span a range of +20 to +80dB in mic mode — there are 10dB steps up to 50dB and 5dB increments thereafter. This means the minimum mic input level for a +4dBu output is -77dBu, and the maximum is around +13dBu (this with the output fader set at about 9 o'clock to avoid overloading the output stage).

Testing the phantom power delivery, I measured the unloaded voltage as 48.1V, but it couldn't quite supply the maximum

current (10mA) in the specification — but this is unlikely to be a problem in practice, as few active mics demand anything like that amount of phantom current. Moreover, Bo tells me there's an easy fix for this, which he can implement on future production units. Rather more concerning is that phantom power remains available on the 'combi' XLR when the DI or line modes are selected, which introduces the risk of causing damage to connected line-level sources should phantom be left on or activated inadvertently. Having said that, the line input pad will reduce the voltage seen by any connected equipment, reducing this risk, and on the plus side this arrangement allows the line input mode to be used when working with extremely loud sources and very high-output active mics!

Unsurprisingly given the multi-purpose input socket, the line source selection pads the input down with a balanced 30dB attenuator in advance of the shared Carnhill VTB 9045M input transformer (in a mu-metal screening can). This arrangement presents a 10k Ω input impedance and the gain range becomes -10 to +50dB, allowing the line input to accept a +24dBu signal without complaint. Unity gain for line sources is achieved with the gain switch set to 30dB and the output fader fully clockwise. With the DI input selected the gain range is the same as the line input, -10 to +50dB, and there's masses of headroom — it accepted an unbalanced +20dBu signal without any concern at all, but there's also plenty of gain on tap for low-output instruments. The DI input impedance is stated as 100k Ω which is lower than most active DIs and may well affect the tonality of electric guitars... but I liked the sound character when I played my passive bass through it.

A miniature (and easily overlooked) toggle switch at the extreme left of the unit turns the unit on (the external mains wall-wart is always live, of course), and the

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Golden Age Premier Pre-73 & PreQ-73

PROS

- The classic Neve sound character at a very attractive price.
- Masses of mic gain and headroom available on both models, with reasonable noise performance.
- Versatile EQ options on both models.
- Nice-sounding DI mode, with plenty of gain and headroom.
- Carnhill input and output transformers.
- Improved internal wiring and component quality.
- Well-chosen and optimised feature sets.

CONS

- Phantom power available on the Pre-73's input in line/DI modes.
- Low level of insert signal limits its usefulness with third-party outboard devices.
- Not as easy to overdrive the PreQ-73's output transformer.

SUMMARY

Finally, Golden Age have blended great aesthetics with the fabulous sound and remarkable prices of their Neve-esque preamps. Excellent value for money, with high-quality components and construction, masses of gain and headroom, and a great sound. Bo Medin's best offering yet.

The Pre-73's insert point allows a separate Golden Age (or other) EQ to be inserted before the output transformer.



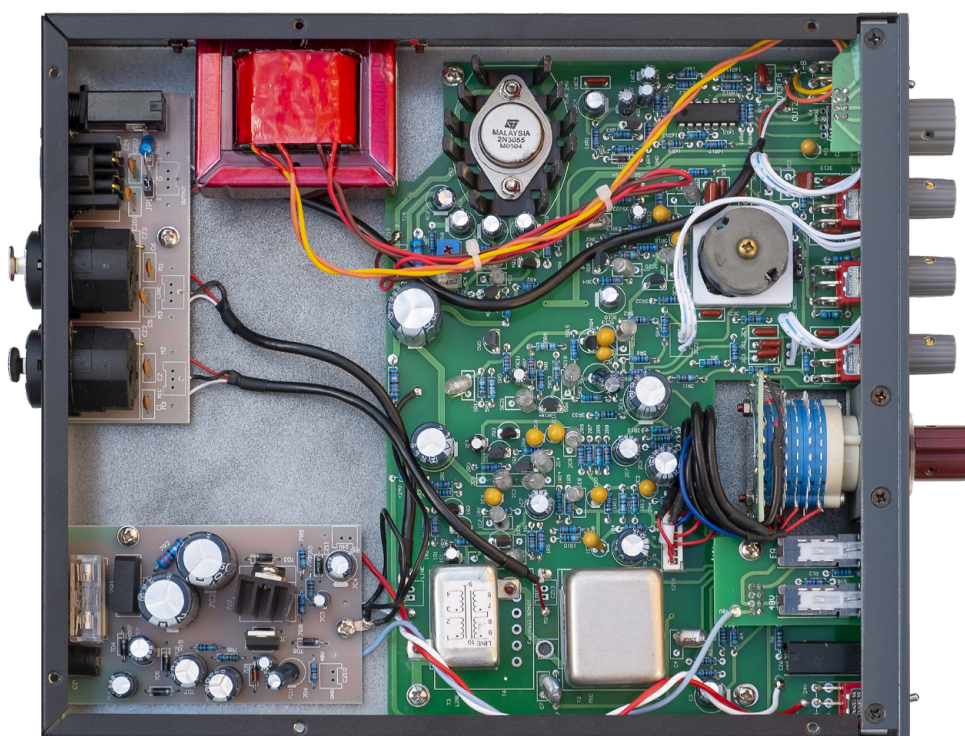
The internal circuitry of the PreQ-73 Premier

» associated red power status LED is all the way on the other side of the front-panel, integrated with the bar-graph output meter. In addition to this power LED, the metering comprises two green indicators for output levels of -10 and +4d Bu, plus a yellow LED for +14dBu, and a red clip light which comes on at +25dBu, about 2dB before the output stage clips.

The grey output fader has no panel calibrations at all, but introduces 16dB of attenuation at the 12 o'clock position, and fades down to fully off (-76dB) at the counter-clockwise end. This control actually adjusts the signal level from the input gain-stage going into the output driver stage, and so allows the input stage to be deliberately overdriven without clipping the outputs. However, a toggle switch next to the output level knob inserts a 14dB pad *after* the output transformer, specifically to allow the output stage and its transformer to be intentionally overdriven as well (or instead), while still delivering relatively sane signal levels to the equipment receiving the preamp's output.

To the right of this output level knob is a polarity-reversal toggle, which flips the connections of the transformer's secondary winding, and two more toggles between the gain and output controls select high-pass filter options and 'Air Boost' EQ (a third operates the output pad mentioned above). The Air EQ options are the same as those in the Project Pre-73 MkIII (+3 or +6 dB shelving boost at 30kHz), and the high-pass filter turnover frequencies are marked on the panel as being 80 and 200 Hz (plus an off position) — but I actually measured the -3dB points at 50 and 170 Hz, which is the same as the Project Pre-73 MkIII. With its gentle first-order (6dB per octave) slope, the higher setting is useful compensation for microphone proximity effects, but its gentleness also renders the lower-frequency option of limited use in reducing unwanted rumbles — although I appreciate that some people don't like the sound of the steep 18dB per octave filter that Neve used in the original design.

Moving to the rear panel again, the transformer-balanced output is presented on both an XLR and a TRS socket and, because the Pre-73 is based on a vintage circuit design from the days when impedance-matching was *de rigueur*, a jumper link on the output connector's circuit board straps the requisite 600Ω termination across the transformer's



secondary winding to ensure the correct frequency response and output level when connected to modern (voltage-matched) high-impedance destinations. Should you wish to connect the Pre-73 Premier to some other vintage (or vintage-esque) device with an old-fashioned 600Ω input impedance, a 'double termination' (which would reduce the output level considerably as well as wreck the HF frequency response) can be avoided simply by removing the jumper link.

As with several of the Project-series preamps, an unbalanced TRS insert point is also included on the rear panel of the Pre-73 Premier (wired conventionally with tip=send and ring=return). This insert point is intended for use with Golden Age's own EQ73 or EQ81 equalisers, and while it can also be used with third-party outboard devices, the nominal insert signal level is quite low at around -14dBu (for a +4dBu output) — purely because of the preamp's gain structure and the insert point's position between the input and output gain stages. Golden Age's own EQ units are designed to work with that depressed operating level, of course, and it shouldn't cause significant

problems with most third-party equalisers, but with many dynamics processors the signal level may not rise sufficiently above the minimum threshold to activate any gain reduction.

PreQ-73 Premier

The PreQ-73 Premier is functionally similar to the Project PreQ-73 that it replaces, but shares the same revised aesthetics as its Premier sibling, with a grey-painted front panel, quartet of white buttons, miniature toggle switches, red winged gain knob, and grey fluted EQ and output controls. It also has the same upgraded power regulator circuit board and (almost) connector-free hand-wiring, but the main electronics and rear connector circuit boards are different.

On the input side, the PreQ-73 Premier differs significantly from its sibling by featuring separate mic- and line-input 'combi' XLRs, the required source being selected via the gain switch, copying Neve's original methodology. As this unit already incorporates a simplified three-band EQ section, the insert socket is omitted. Consequently, the quartet of white buttons activates phantom power (with a red status LED), selects the DI input, and reconfigures the mic input transformer for the low-impedance mode — as in the Pre-73 Premier. The fourth button, used previously for line-source selection, is employed here to engage the EQ section.

Alternatives

There are lots of Neve clones around, of varying quality, with the nearest competition probably being **Warm Audio's** rackmount **WA73** and **WA73-EQ**. But I can think of none in a stand-alone format that match the quality and features of the Golden Age Premier units at anywhere near these prices.

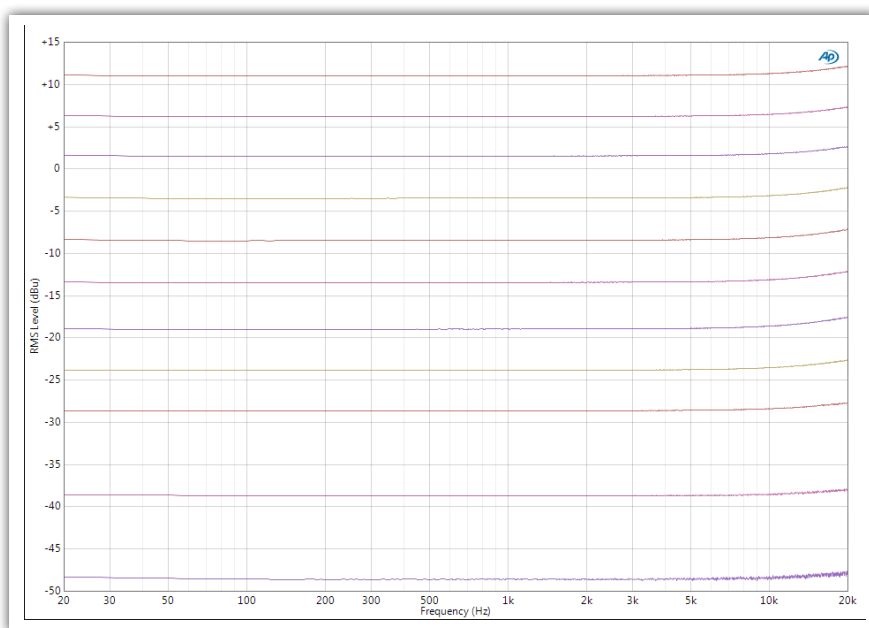
» The arrangement of toggle switches for powering the unit and reversing the output polarity are the same as the Pre-73 Premier, as are the output metering and fader control, but the output pad option has been omitted. As before, the output fader introduces around 16dB of attenuation at the 12 o'clock position, and fades all the way down to silence (-80dBu in the review model), but the absence of an output attenuator option makes it less convenient to intentionally overdrive the output transformer.

As intimated above, the gain switch in this model is a much more complicated 23-step affair, with separate regions, separated by off (mute) positions, automatically selecting the line or mic inputs, the latter inserting an extra gain stage in the signal path at high settings. The line section gain range spans -10 to +20 dB, while the mic range covers +20 to +80 dB — both with 5dB increments. The DI input only works with the gain switch in its mic region, and enjoys a gain range of -13 to +46 dB, with an input impedance of around 100k Ω again. For completeness, the line input impedance measured around 12k Ω , and the mic input is switchable between 1.2k Ω and 300 Ω . I'm pleased to report that phantom power is never present on the line input, but is present on both the XLR and TRS terminals of the mic input socket. Again, the supply can't quite deliver the full spec 10mA of current, but few will ever notice the shortfall, and a fix is in hand anyway.

Arrayed between the gain and output knobs are three small, dark-grey, fluted and centre-detented controls to adjust the three-band EQ, each with an associated toggle selecting alternate frequencies. The circuitry is derived from the Golden Age Project EQ-73, but with fewer frequency options. The upper and lower bands are both shelving types, and the low band's corner frequency is switchable between 55 and 220 Hz, with a gain range of ± 15 dB. The high-band has 10 and 16 kHz corner frequency options, and a ± 20 dB range.

Built around an inductor in the traditional way, the mid-band section enjoys a ± 15 dB range and three centre-frequency options of 3.2kHz, 1.6kHz or 350Hz. However, a jumper link on the main circuit board (just in front of the inductor) allows the lowest option to be raised to 700Hz, if preferred. (Another jumper link on the output connector board provides the removable 600 Ω output termination, as with the Pre-73).

Internal construction is to the same high standard as the Premier Pre-73, with



Frequency-response plots for the Pre-73 Premier at each gain setting reveal a very consistent performance — some lesser preamps struggle to maintain the high-end response at elevated gain settings.

through-hole components throughout, and discrete, three-transistor Class-A gain-stages running on a single-sided 24V supply rail. Polystyrene and tantalum capacitors dominate the signal path, and the only circuit-board connector is for the gain switch wiring.

As the PreQ-73 Premier has physically separate mic and line inputs, it also has two separate input transformers: a Carnhill VTB 9046M microphone input transformer (as in the Pre-73 Premier) and, as standard, an unmarked compact Chinese line input transformer. This measured extremely well and is apparently also used in several of the Project preamps, but the circuit board is engineered also to accept the (larger) Carnhill VTB 9046M line transformer, which can be installed at extra cost, if desired, at any time. The output transformer is the same Carnhill VTB 2514 as in the Pre-73 Premier.

Impressions

The Neve 1073 has become a legendary and much coveted preamp design, and numerous manufacturers offer clones and homages to emulate its highly desirable characteristics — its technical imperfections being key to its versatile sound character. Golden Age make several variations on the same core theme already, of course, but these new Premier models combine an attractively sympathetic vintage style and enhanced construction with the much-admired sound, while retaining remarkably cost-effective pricing. The controls all feel solid and reliable, with good

ergonomics, and the different features are nicely judged across the two models (although I'd have liked an output pad switch on the PreQ-73 Premier, just to make it easier to 'stress' the output section). Subtle differences can be heard in the sound of these two preamps when compared directly, but both share that lovely warm and smooth character which is so typical of the Neve sound, and both move gracefully into that delightfully musical saturation/distortion effect when pushed.

Although the Preq-73 Premier's EQ section is much simpler than that of the original 1073 module, it is still very versatile. The band frequency options are well chosen and cover most mic-tweaking requirements very nicely. But I also found the Air EQ and high-pass filter facilities on the simpler Pre-73 Premier remarkably versatile and useful for gentle but effective tonal shaping at source.

In essence, these new Premier preamps continue the already excellent GA Project heritage, but add great vintage looks and a more reliable and better-sounding construction — yet without pushing the budget too far upwards. Very nice indeed! **///**

E Pre-73 Premier £412, PreQ-73 Premier £529, Carnhill line input transformer upgrade for PreQ-73 Premier about £75. Prices include VAT.
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This article was originally published
in Sound On Sound magazine,
March 2019 edition



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