Aurorasound Preda

MARTIN COLLOMS TRIES AN INTERESTING JAPANESE PRE-AMPLIFIER THAT COMBINES SOLID STATE CIRCUITRY, A TRANSFORMER-COUPLED VOLUME CONTROL, AND FULL REMOTE CONTROL

The Review System
Audio Research *REFERENCE 5 SE,* Townshend *Allegri* control units; Vitus *SIA-025*, Naim *NAP300* and Krell *Duo300* power amplifiers; Naim *UnitiServe* network server and S/PDIF source; NAIM *NDS* Streamer/DAC (*555 PS)*, *Chord Hugo* DAC, Linn *LP12* (*Radikal/Keel*), Naim *ARO*, Koetsu *Urushi Vermilion,* Naim *SuperLine/ XPS* sources; Wilson Audio *Sasha Series-II*, Magico *S-5*, Quad *ESL 63* speakers; Naim *FRAIM* racks; Naim *Super Lumina*, *NAC-A5*, Transparent *MM2* and Van Den Hul *The First Ultimate* cables.

Aurorasound is specialist Japanese audio manufacturer with a good track record for high quality design and build. The founder of the company is someone called Shinobu Karaki, a highly experienced and respected electronic designer who worked for Texas Instruments Japan for 28 years. He is also an audio enthusiast, and started up Aurorasound in 2010. His fundamentally solid state designs involve some novel approaches, searching for new solutions to both higher subjective fidelity and greater technical accuracy.

We very much enjoyed listening to Aurorasound's *Vida* phono pre-amp a couple of years ago, publishing a notably positive review in *HIFICRITIC Vol7 No3* (the July-Sept issue in 2013), so for this review we're taking a closer look at the £8,000 *Preda* line level pre-amplifier. The two units don't match at all cosmetically – they're different sizes and shapes, and unlike the *Preda* the *Vida* even has a wooden sleeve and external power supply.

Shinobu Karaki has certainly aimed high with the *Preda*. Seeking to maximise the performance of a theoretically near-lossless stepped transformer attenuator, he uses solid state electronics to buffer the transformer interface, both from the input and also to the output sections. The electronics conveniently provide both balanced and single-ended facilities for both input and output, a -16dB gain range switch partly mutes the level for low volume listening, and the design includes relay-controlled absolute phase inversion. A large LED display shows the volume level, as 54x1dB steps.

Six inputs – two XLR balanced pairs and four RCA single-ended pairs – are provided, along with balanced and unbalanced outputs (both of which may be operated simultaneously). At 10.8kg, the *Preda* is surprisingly heavy for its size, and is built from thick aluminium plates bolted together to close tolerances, ensuring very solid, vibration resistant construction, measuring 42x9x33cm (WxHxD). It normally sits on turned metal feet with rubber like polymer anti-scratch inserts, but I certainly enjoyed the clarity and dynamic uplift provided by Alto Extremo *Fat Boy IIs*, here used as a trio. All the front panel functions and more are duplicated on the neat and solid metal infra-red remote control, which has a good operating range. The unit has a usefully high input impedance of 56kohm, plus a low 47ohms output impedance.

MARTIN COLLOMS

Sound Quality

The first part of this assessment was easy as this control unit is velvety quiet, with dark backgrounds from which a clear, highly neutral and very well focused sound emerges. The designer's prime aim was for stable, high quality sound over the wide volume range, and that has been achieved in spades. A slight mechanical clicking was audible as the level control is operated, but this was considered inconsequential.

Stereo images were very stable and consistent with frequency, and were also notably sharply defined, providing fine depth and satisfying lower level ambience. First impressions were of its impressive standard of neutrality, though this became mildly modified following better acquaintance. Ultimately it resolved to a tinge of 'bleaching' or 'whiteness', a very slightly desaturated timbre that was just a little distanced from the familiar character and tonal balance of well known musical excerpts. If such a thing is possible, the overall sound is perhaps just a little too neutral in the classic sense.

Nevertheless, with its exceptional clarity and highly defined focus, the sound inspired considerable confidence, and also conveyed the impression and sensation of a wide linear bandwidth. Rhythm and timing was rather better than average, and (amongst others) it made a good stab at driving our reference Naim *NAP 300* power amplifier. It was found to be particularly effective with highly complex micro detailed percussion pieces, such as heard on Jan Garbarek's *Twelve Moons*.

When playing some Steve Reich pieces, the subtle drumming, complex counterpoint, gamelan and other percussion instruments were all handled with consummate ease. Fatigue and distortion were vanishingly low, and it proved easy as well as thoroughly entertaining to listen to a wide range of material for long periods into the late evening, while the clarity remained present even at lower volumes, leading to an impressive overall score of 115 marks.

Conclusions

While rather more costly than the matching phono stage, this control unit sets a still higher standard. High precision best describes the sound, build and operation, while the range of balanced and single-ended inputs alongside full remote control represents an all-too-rare combination of virtues. Alongside its fine flexibility and ergonomics, the technical and subjective performance alone attains the Audio Excellence standard, which is the rating we award this highly precise, neutral and informative control unit.

Technicalities

The key component in this design is the use of a well graded, switched-step volume control, chosen to avoid the known (if usually tolerable) deficiencies of the continuous track rotary controls that have been with us for close to a century. A stepped control may be used to connect a 'ladder' of discrete resistors, but these may also have some sound quality losses, together with changes in operating bandwidth and matching over their range. Alternatively the steps can be a succession of taps on a high quality audio transformer – some 54 steps are used here – a method that confers very low noise and distortion and also preserves signal power through better input/output matching.

Very good as the best transformer-coupled volume controls can be, when operating throughout the wider control range that's required in practice, impedance matching requirements at both the input and the output will also be changing. At low frequencies this can affect distortion. In addition the output impedance will also vary over the range used, and this can affect the phase and frequency response at high frequencies. Aurorasound's amplifiers buffer the transformer-attenuator, allowing it to operate under optimally terminated conditions. The build quality here is true dual mono, even for the power supplies, and selected gold-contact Pickering reed relays (from the UK, and hermitically sealed in glass) promise a long, stable operating life, and are used here, both for input and volume selection duty.

A proprietary Aurorasound core amplifier module is widely used in this pre-amplifier. Indeed, the *Preda* uses no fewer than six of this discrete-component design, which has a wide, low distortion bandwidth. Power supplies are built back-to-back in order to reduce noise leakage into the audio circuits. In addition, instrumentation grade op-amps are used for the balanced inputs to condition these signals prior to connection to the main signal path. The build quality is first class throughout.

HIFICRITIC AUDIO EXCELLENCE

Manufacturer's Data

Inputs	6x Line level: 4x single-ended RCA-phono; 2x balanced XLR
Outputs	2:1x single-ended RCA-phono; 1x balanced XLR
Line Gain	3x (10dB)
Frequency Response	5Hz – 100kHz for -1.5dB
THD	0.008% (1kHz, 0.5V output)
Input Impedance	56kohms
Output Impedance	47ohms
DC offset	Zero
Size (WxHxD)	420x90x330mm
Weight	10.8kg
Price	£8,000

Contact:
Pure Sound
www.puresound.info
Tel: 01822 612449