The Goldmund Mimesis 9.2 and Mimesis 9 Amplifiers

"Ich liebe viel von dir, Goldmund.
Ich beginne zu verstehen, was Kunst ist."

HANNES UND GOLDMUND. Hannes Peter.

AN HISTORICAL APPROACH

Driving low efficiency speakers to high levels with transparency and wide dynamic contrasts has always been a very difficult task. Historically, high powered amplifiers have been grossly inadequate approximations of their more neutral, faster, and more accurate low powered counterparts. Despite this, the number of high quality, low efficiency speakers available to the music lover has grown dramatically over the past few years. During this same period, the phenomenal dynamics and transparency of the moderately powered GOLDMUND MIMESIS amplifiers have become legendary.

Many audio enthusiasts coupled their MIMESIS amplifiers with low efficiency speakers. Though the GOLDMUND amplifier could not drive these speakers to maximum level, all agreed that the dynamics and transparency were shockingly better than what they had experienced with the huge amplifiers they had been using. A more powerful MIMESIS amplifier was badly needed.

Research began in 1986. Matching the world standard speed and coherency of the MIMESIS 5 in a high powered amplifier was a difficult task, but the extraordinary performance envelope of the "GOLDMUND Amplification Stage" enabled the design team to have a 200 watt per channel amplifier operational in the GOLDMUND laboratory by 1988. The peak power of over 350 watts was sufficient to drive the most efficient speakers with dynamic freedom far exceeding conventional amplifiers.

Imagine the surprise of the engineers when they endorsed the circuit in a conventional chassis and the performance deteriorated dramatically. As the power output increased the MIMESIS magic disappeared. Every traditional electromagnetic parameter was investigated in an attempt to solve the dilemma.

But the real surprise was the solution, discovered by the designer of the GOLDMUND REFERENCE. He applied the GOLDMUND "Mechanical Grounding" (TM) principle to the design of the MIMESIS 9 line, building the amplifier chassis as if it were a translatable speaker, considering mechanical vibrations to be THD problem.

The sonic result was staggering. The transparency and dynamics were not only preserved at the highest levels, but were vastly improved even at low levels. Transient peaks sounded significantly louder than before.

The technical explanation is now very well known. As voltage, and more significantly, current in an amplifier increase, the components themselves begin to vibrate, modulated by the signal. Power supplies with poor rejection, output transformers, and tubes are the worst offenders, but even resistors and capacitors contribute some vibration. When high current flows through these areas, particularly power supplies and output circuits, the amplifier's input circuitry can correct the resulting vibrations into spurious signal. The phenomenon known as the microphonic effect, is well documented in tubes, but is also very critical within transistors.

In conventional amplifiers, the loop is closed. Output circuit generates input circuit captures. The parts in between resonate, the chassis follows, and so amplifies a large spurious signal that causes stressing, restricts the dynamics, and confuses the musical message of the input signal. Applying the GOLDMUND "Mechanical Grounding" (TM) is the only way to break that loop.

APOLOGIE DE L'ANALOGIE

Transparence et puissance, finesse et force, pastel et rauque, il croyait de réaliser une symbiose contradictoire, à la joie inconsciente, dans le monde de la haute-fidélité. Il croyait concevoir un amplificateur capable de transcender l'apocalypse sonore d'une symphonie de Mahler et, simultanément, l'insupportable brutalité du récit des "bons de la salute" de Schumannes, "Browning" et "Swaukas".

La banalité du vivant nous apprend que c'est l'idée de structure qui s'oppose à tout affabulation de la forme. Goldmund révonna son analogie. C'est cette idée de structure qui avait engendré la réalisation de la plateforme référence. C'est cette idée qui, en d'autres termes, avait justifié la présence d'une barre d'armo- rie dans la vitrine de l'auditoire d'une poésie - la poésie vulgaire - qui améliorait la rigueur de cet instrument, et c'est au plaisir de encore. C'est cette idée que, analogiquement encore, Goldmund évoquait dans la conception de son amplificateur. Pour la pre- mière fois dans l'histoire de la haute-fidélité, un montage d'amplification allait être pensé, traité, construit, comme un "Système vibratoire".
Il cristallo, con la sua eccezionale giacenza e la sua capacità di refrangere la luce, è il modello per il perfezionismo che lo stesso italo come un emblema, e questa prerenale è disuntata ancora più significativa quando si sa che certi prodotti della nascita e della crescita del cristallo sembrano assai diversi dagli esseri biologici più viventi, continuando così per anni tra il mondo animale e la materia viva. Tuttavia sono sciocchi che non si facciano del lusso di dedicare ai tempi per l'immagazzinamento, è il capitolo leggere recentemente che i modelli del processo di formazione degli esseri viventi sono da un lato il cristallo, dall'altro la fiorente...

Questa doppia metodica - utilizzata dalle Culture per definire il suo ideale di opera d'arte - sono per GOLDMUND l'asatura illustrazione del progetto che ha portato alla realizzazione dell'amplificatore Mimensi 90.

A immagine del cristallo - e per la prima volta nella storia dell'aula-dol-letta - la concezione intera di un amplificatore è tradizionale. Circuiti e componenti si organizzano secondo le strutture estremamente rigide, capaci di sopportare, di domare, di eseguire tutti i fenomeni vibratori, molti critici in un amplificatore di altezza potenza. L'immagine del cristallo la struttura meccanica del Mimensi 90 è stata realizzata con un assoluto rigore formale.

Ad immagine della fiorente, 'costituisce di una forma globale estremamente lineare, esercitando una azione insignificante, i circuiti del Mimensi 90, grazie alla loro eccellente capacità di trasduzione transconduttanza assicurano il segnale con la stessa corrente sottile per quanto livello sonoro richiesto, anche con case di efficienza molto debole.

A immagine del cristallo, il Mimensi 90 dà la possibilità di 'vedere' la musica, e la immagine della fiorente persegue l'obiettivo di dare la musica. Bentavvertire Mimensi una linea di modelli elettronici costituita per GOLDMUND un impiego etico e tec. Uno sfida che costituisce da parte del suo prodotto ad alta fedeltà un oggetto che, grazie alle sue qualità sonore, rende il riscatto contattistico e l'opera d'arte 'italiana' del rispecchiamento. Quell'arte che ha riscoperto l'audiofoni dell'architettura e del fiorente ha visto il suo nuovo gioiello per organizzare, attraverso il disegno del colori, la struttura e la luce: l'arte tra l'uomo e la realtà esterna.

Il Mimensi 90, con i mezzi tecnologici di un buon epoca, riuscirebbe acquisire un rapporto privilegiato con quell'altra archeologia che è la musica, un rapporto di cristallo di fiorente.

TECHNICAL DESCRIPTION

The application of the GOLDMUND -Mechanical Grounding (TM) principle to the structure of the GOLDMUND Mimensi 90 and 91 is very straightforward:

- The main sources of vibration, the power supply transformers and output stage are rigidly mounted on a single rigid block.
- Each of the 2 front feet supports one of the massive transformer blocks.
- The rear feet elevates the output stage vibrations.
- The input circuitry is flexibly mounted to both output stages and the chassis.
- The chassis is completely decoupled from the 3 rigidity by specially developed isolation insulators. It is composed of stainless steel, welded and damped. The net weight of the amplifier is around 65 kilograms.

Two different amplifiers are part of the family. The Mimensis 90 is a stereo 2 x 175 W/4% each. The Mimensis 91 is a mono 250 W/each unit using the same circuitry. Though the Mimensis 90 and the Mimensis 91 are large and massive, their electronic design is a study in technical refinement and sophistication, a circuit that could only have evolved from the Mimensis 9. The very-low yields the slow speed and group delay characteristics. The breakthrough "GOLDMUND Amplification Stage" removes the heart of the problem, but the Mimensis 90s have far greater current and voltage capabilities and remarkably, an even wider power bandwidth.

The input stages are mounted on dedicated circuit boards that progressively decrease the sensitive low level components from output stage vibrations. These boards incorporate an advanced electrical grounding configuration to minimum noise, making the highest powered Mimensis 90 even quieter than the low power Mimensis. Paris are used are of the highest sonic integrity and long-term stability, as with all Mimensis designs. As in all the Mimensis, low value filter capacitors are used to avoid the detrimental storage delay of conventional high capacitance power supplies. The high-speed toroidal transformers are moulded in dumping compound, in two 15 kilogram blocks. The input stage is powered by two independently regulated power supplies to minimize dynamic loss on high transients.

Due to the phenomenal transient capability of the Mimensis 90s, their protection circuitry must be even faster than that of the other Mimensis. Protection against overdrive and excessive DC on the incoming signal is provided, allowing the Mimensis 90s to safely drive ultra-fast, high efficiency speakers such as the GOLDMUND APOLLO.

Designing an aesthetically satisfying enclosure around for innovative mechanical design was quite challenging. Not surprising, precision Swiss craftsmanship has created an amplifier of modest dimensions considering its power. Rather than mere front panel ornaments, the contoured handles exemplify traditional Swiss ergonomic design, allowing two people to comfortably move the amplifier. The maximum performance and accuracy of the GOLDMUND "Mechanical Grounding (TM) construction will be realized when the Mimensis 90s are located directly on the floor.

When the Mimensis 9 project began, the goal was only a more powerful Mimensis. The end result exceeded even the most optimistic expectations.
MIMESIS 9.2 TECHNICAL DATA

POWER
- Nominal Power - 2 x 175 Watts RMS (0 - 8 Ohms)
- Maximum Power - 2 x 500 Watts RMS (0 - 16 Ohms)
- Maximum Current Swing - 65 Volts peak
- Maximum Current Swing - 35 Amps peak
- Three figures are for both channels driven.

GROUNDBUS
- Separation - > 100 dB between channels locked ground.

INPUT SENSITIVITY
- Nominal Level - 1.35 Volts (6 dB).
- Input Impedance - 50 Ohms.

POWER SUPPLY
- Nominal Line Voltage - 117 Volts, 50/60 Hz (by internal wiring) or 100V on special order.
- AC Voltage Range - +/10%.
- Maximum Power Consumption - 1600 W.
- Standby Power Consumption - 80 W.
- 4 Toroidal Transformer, 4 Separate Power Supplies.

OPERATING TEMPERATURE
- Room temperature: -35 to +40 degrees Celsius (-29 to +104 degrees Fahrenheit).
- Internal temperature: +45 to +65 degrees Celsius (+113 to +149 degrees Fahrenheit).

GROUNDING
- Floating Channels connected to Earth.
- Switch for coupling signal Ground into Earth.

SAFETY FEATURES
- DC Protection Threshold: 4.5 Volts.
- HF Protection Threshold: 3 V RMS at 50 kHz.
- Thermal Protection Threshold: 95 degrees Celsius (194 degrees Fahrenheit).
- AC Line Fuse: Min. 6 A Slow-Blow for 220 Volts.
- Maximum AC Line Fuse: 10 A Fast-Blow Fuses (2).
- Overload Protection: 10 A Fast-Blow Fuses (2).

FRONT PANEL CONTROLS
- Power Keys (2).
- Level Controls for Power, Fuses blown and overloading.

REAR PANEL TERMINALS AND CONNECTIONS
- Power Cord: 2 x Universal Soldered (3 Lugs) providing Line Protection Control.
- AC line fuse.
- Green and white Mains Earth Binding Post.
- Speaker connector: Heavy Duty 4 Way Binding Post.
- Input Connector: RCA and XLR (4-Pole Symmetrical Input).

SIZE AND WEIGHT
- Dimensions: 48.3 cm (19") Wide x 46.3 cm (19") Deep (+ 3 cm (2") for handles) x 24.5 cm (10") high.
- Weight: 65 kg net.

WARRANTY
- 3 years parts and labor.

Other specifications: see Mimesis 9.2 Technical Data.

MIMESIS 9.2 TECHNICAL DATA

POWER
- Nominal Power - 250 Watts RMS (2 - 16 Ohms).
- Maximum Power - 400 Watts RMS (2 Ohms).
- Maximum Voltage Swing - 90 Volts peak.
- Maximum Current Swing - 60 Amps peak.

FREQUENCY RESPONSE
These figures are for any level between 0 and nominal power, +/- 0.1 dB, 0 - 150 kHz, +/- 0.5 dB, 0 - 500 kHz; +/- 1 dB, 0 - 1 MHz.

INPUT SENSITIVITY
- Nominal Level - 1.4 Volts.
- Input Impedance - 10K Ohms.

GROUNDBUS
- Propagation Delay - < 100 nS, cable from DC to 200 kHz.

DISTORTION
- Figures valid for all loads from 0 to 25 Watts / 0 Ohms.
- Dynamic: 10 dB, 0.01% (80 dB).
- Signal / Noise Ratio: > 65 dB (50 Hz - 20 kHz).
- Weighted AWA: > 100 kHz.

NOISE
- Signal to Noise Ratio: > 1.5 dB (50 Hz - 20 kHz).
- Weighted AWA: > 120 kHz.

POWER SUPPLY
- Nominal Line Voltage: 117 Volts, 234 Volts (by internal wiring) or 100V on special order.
- AC Voltage Range: +/- 10%.
- Maximum Power Consumption: 1000 W.
- Standby Power Consumption: 80 W.
- 2 Toroidal transformer, 4 Separate Power Supplies.

GROUNDING
- Separate Ground for Each Channel.
- Mains earth connected to Earth.
- Switch for coupling signal Ground into Earth.

SAFETY FEATURES
- DC Protection Threshold: 4.5 Volts.
- HF Protection Threshold: 3 V RMS at 50 kHz.
- Thermal Protection Threshold: 95 degrees Celsius (194 degrees Fahrenheit).
- AC Line Fuse: Min. 6 A Slow-Blow for 220 Volts.
- Maximum AC Line Fuse: 10 A Fast-Blow Fuses (2).
- Overload Protection: 10 A Fast-Blow Fuses (2).

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