

THE GRYPHON



Legato Legacy Owner's Manual

Legato: Italian, means literally "bound together." In classical music, a composer's instruction to play in a smooth, flowing manner without detached notes

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Introduction

Welcome to the global family of proud owners of fine audio components from Gryphon Audio Designs of Denmark. Your new Gryphon unit has been painstakingly designed to re-create the sound of live music taking place in its original recorded space. Every Gryphon product is designed to cater to the needs of the most discerning music enthusiast with sumptuous styling and superb user-friendliness which elevate it above the mundane world of conventional audio components.

As audiophiles, the members of the Gryphon design team are constantly reminded to keep their priorities straight. We are not involved in “hi-fi” for its own sake, but strictly as a means to an end, in the service of our lifelong love of the live music experience in all its sonic and emotional glory.

Our higher goal is to bring to the listener a “You-Are-There” sensation. In taking up this challenge, the Gryphon designers go back to basics to analyze the essential nature of the live music experience. For us, an awareness of soundstaging, ambience

and concert hall dimensions are necessary components. Dynamics and an unambiguous sense of instrument location even in the loudest passages are also high priorities. To achieve these objectives, Gryphon products offer exceptional speed and agility along with seamless coherence in the time domain.

Since 1985, Gryphon Audio Designs has quietly gone about the business of creating fine home audio components. We know that you will appreciate and enjoy the benefits of our accumulated experience and share our abiding passion for music.



The Gryphon

In Greek mythology: A fabled creature, half-lion and half-eagle, combining the power of the “King of Beasts” with the grace of the “King of Birds”. The guardian of the source of gold and protector of the Dionysian cup of infinite wealth.

In the real world: An acclaimed Danish audio engineering company employing cutting edge technology and common sense in the pursuit of the purest musical experience. We feel that the gryphon is an appropriate symbol for our high sonic goals.



Flemming E. Rasmussen painting 1967



The Gryphon Head Amp

Legato

Legato: Italian, means literally "bound together." In classical music, a composer's instruction to play in a smooth, flowing manner without detached notes

The Man

Gryphon Audio Designs is the brainchild of Flemming E. Rasmussen and the fulfillment of a lifelong dream to allow the purest essence of the live music experience to be recreated in the home environment.

Rasmussen holds a degree in painting and graphic arts from the Aarhus Art Academy, Denmark. During his studies, Rasmussen developed close relationships with the local music community and designed many LP covers and concert posters. After graduation, he taught photography and painting and designed textiles, before founding 2R Marketing, which quickly became Denmark's leading High End audio import company.

Gryphon Audio Designs was founded in 1985 as an offshoot of 2R Marketing. The first product, the now legendary Gryphon Head Amp, grew from a one-off spare time project developed only for the designers' own home

systems. Although the Gryphon project was initially strictly a hobby, not an actively pursued commercial venture, demand generated by reviews and word-of-mouth led to the formal establishment of Gryphon Audio Designs as a separate corporate entity.

Following the immediate success of the Gryphon brand, all import business was phased out in 1993, so that Rasmussen could dedicate his efforts entirely to Gryphon.

Made In Denmark

Every product from Gryphon Audio Designs is designed and built in Denmark. This is much more than just a geographical fact. It is also a seal of approval, a stamp of quality. Living in a region with no natural resources (no oil, coal, precious metals, etc.), the Danes have learned to rely on their quick wits and skilled hands. Innovative technology, beautiful craftsmanship, pride in one's craft and a keen eye for attractive design are some of the long-standing Danish traditions which are distilled to their finest essence in every unit that bears the Gryphon name.



Gryphon is located in beautiful tranquil surroundings.

Musical Objectives

While scientific method and sophisticated technology play an important role in our electronics design work, at Gryphon we never lose sight of the fact that the keen ears of an experienced listener are the most crucial “calibration tools.” Therefore, every Gryphon product exists for one simple purpose: to bring the user closer in the never-ending quest for a more natural and convincing musical illusion.

Every Gryphon design has been built to cruise effortlessly through even the most demanding musical passages, regardless of volume level, with a musical presentation defined by supreme articulation and immediacy, subtle dynamic shading and razor-sharp focus. Refinement and delicacy are combined with power and authority for a natural, involving listening experience.

The Gryphon Master Tape Collection

In the Gryphon listening rooms, we are fortunate to possess a unique library of more than 1,000 original master tapes of recordings made during the Golden Age of studio engineering from 1956-1976.

Unlike conventional commercial releases, our master tapes capture the dynamic contrasts and subtle inner harmonic structure of the musical event, forcing us to work to a higher standard in our efforts to maintain the integrity of the original musical performance.

Design Principles

With state of the art technical equipment and some of the finest minds in the audio engineering field at our disposal, the Gryphon brand name continues to define the highest audiophile standards of subjective and technical performance.

The dual mono configuration radically eliminates any possibility of crosstalk or other interference between channels and provides infinite channel separation which contributes to the ability to create space, focus, depth and transparency.

Because the electrical power coming out of your wall fluctuates wildly in terms of voltage and distortion, Gryphon incorporates heavily regulated multi-stage power supplies that act as effective mains conditioning filters. Displays and control circuits are fed by a separate power supply to isolate any digital noise artifacts and effectively prevent them from contaminating the signal path.

While the printed circuit boards in more conventional audio products utilize conductor tracks a mere 35 micron thick, Gryphon employs at least 70 micron traces of the highest purity.

Beginning with our very first product, "The Head Amp" all Gryphon products have featured extremely wide frequency bandwidth, because the ability to reproduce ultra-sonic frequencies with no difficulty ensures linear phase across the audible frequency range.

The implementation of circuits with wideband frequency response is a painstaking endeavor in which the actual layout and ground pattern of the PC boards are crucial to the achievement of superior sonic performance with no loss of inherent stability.

Wideband frequency response ensures the high slew rate essential to the realistic handling of the ultra-fast transients which routinely occur in live music and is crucial in recreating the natural decay of musical instruments. Wide bandwidth also improves phase characteristics, for more correct soundstaging and imaging.

All Gryphon designs are realized

with an absolute minimum of negative feedback, which when present in large amounts can actually increase TIM distortion. All Gryphon preamplifiers are designed with zero negative feedback. Gryphon power amplifiers apply negative feedback judiciously for improved linearity and bandwidth.

Gryphon research into the detrimental effects of magnetically induced distortion (MID) has led to the elimination of magnetizable materials wherever possible. To eliminate the effects of stray magnetic fields, non-magnetic materials are employed throughout, with the unavoidable exception of the transformer shield box.

The mechanical design of the cabinet and assembly methods are all carefully calculated to ensure minimal resonance, either through the use of mechanically grounded high mass or decoupling. Vibration-sensitive components, capacitors in particular, are thus guaranteed a non-resonant environment.

The heavy, thick chassis offers a vibration-proof environment for the sensitive electronics inside and provides crucial shielding from a polluted world of low and



Typical Gryphon module

high-frequency radio waves, power-line radiation and other electrical interference. Meticulous attention to such issues makes a significant contribution to the relaxing, open and transparent Gryphon sound.

Unique, non-invasive protection circuitry offers reliable, fuss-free protection without compromising signal purity and signal path simplicity, with no conventional relays in the signal path to degrade or compress sound.

The ground path has been carefully laid out in order to achieve superior sonic performance with no loss of stability. Component layout has been designed to ensure the shortest conceivable signal path.

Exhaustive investigation underlies the selection of every component part and many original, proprietary components are custom-built exclusively for Gryphon. Because what is left out is just as important as what goes in, an absolute minimum of internal wiring is included.

By lavishing attention on each aspect of the circuit and fully understanding the purpose and behavior of every single part of the whole, our designers can optimize performance in each

section, before moving on to the next step. This ensures simplicity, a short signal path and a unity of purpose with a single, well-defined objective: musical purity.

In the interest of ultimate fidelity, tone controls, balance controls and other unnecessary components have been banished from the signal path.

Exterior Design

From the very beginning, every Gryphon product has offered stunning audio performance, sumptuous styling and superb user-friendliness, catering to the needs of the discerning audiophile who demands musicality, convenience and aesthetics, all without compromise.

In every Gryphon product, form follows function in a unique synthesis of aesthetics and practicality. Gryphon stands for sophisticated technology with a high standard of industrial finish that also incorporates the best of handcraftsmanship.

The peerless finish, build quality, ergonomics and pride of ownership that contribute to the totality of the Gryphon concept can only be fully understood and appreciated up close and in person.

Rasmussen's background in fine arts and industrial design gives every Gryphon product a distinc-



Gryphon Audio Designs in the outskirts of the small town of Ry

tive, luxuriant finish which arises organically out of the audio circuit design and the user interface for a truly unique integration of form and function.

Manufacture and Assembly

At our laboratories and manufacturing facilities in Denmark, we maintain full control over every aspect of development and production, and the members of our conscientious staff diligently follow each Gryphon model from initial concept to early prototype, through to final quality control.

Printed circuit boards are assembled by a supplier of precision military and medical equipment with strict standards of quality control and pre-inspection of components. Chassis parts are manufactured by a specialist chosen solely for the outstanding quality of workmanship. In every aspect of every Gryphon product, the same stringent standards of excellence apply.

Following a 48-hour burn-in, each product is tested again, before being subjected to Gryphon's custom-developed transport simulator which simulates the inevitable shaking that

a product will encounter in transit. The product is placed on top of a very large loudspeaker which plays a special CD with low frequencies which simulate the vibrations of an airplane. Each unit "travels" the equivalent of 40 round trips from Denmark to Australia before leaving the factory.

AC Voltage

Your Gryphon unit is especially made for the AC voltage of the country to which it has been shipped. **If the voltage has been changed, the warranty is void and the product may be unsafe or malfunction.**

Correct AC polarity contributes greatly to optimum performance. If you are not using a three-pin, non-reversible power plug, please experiment with the orientation of the plug for optimum performance.

Burn-In and Warm-Up

Your Gryphon unit has been thoroughly tested and burned in before shipping. Performance will continue to improve during the first 40 – 50 hours of normal use. After this period optimum performance will be reached approximately 45 minutes after turn-on. With the exception of Class A power amplifiers, we

recommend leaving your Gryphon components powered up at all times.

Balanced Connections

All Gryphon products use the AES standard for balanced connections.

1. Ground
2. Positive
3. Negative

We recommend the use of dedicated balanced cables. Avoid the use of adaptors as they degrade performance.

Choice of Cables

Because your Legato is a high-resolution Gryphon audio device, it will immediately reveal the characteristics and possible limitations of the other components in your system, as well as those of the interconnects and loudspeaker cables used to connect your system.

Wiring should never be utilized as "equalizers" to correct errors elsewhere in the system. Instead, any error should be corrected at the source, so that interconnects and loudspeaker cables can be selected solely on the basis of sonic neutrality. For this reason, we employ Gryphon's own range of inter-

connects and cables in every stage of the design of every Gryphon product.

Care and Maintenance

Gryphon products are handcrafted by individuals who take great pride in the high level of fit and finish which we achieve. To maintain your Gryphon components in pristine condition, please follow these simple instructions.

Metal surfaces may be cleaned with a damp cloth. Some product made for treatment of vinyl interiors in cars may be useful. Test the product on a non-visible surface, before using any fluids.

Acrylic surfaces should only be wiped with a very soft, dry cloth. Small scratches may be removed with fiberglass polish. Fingerprints may be removed with a damp cloth. Do NOT use spirits or paper tissue.

The Gryphon Legato

Despite the massive digital hype of the past 20 years, the LP remains by a significant margin the finest high fidelity medium ever offered for home use. Its comprehensive catalogue of titles will never be rivaled by the compact disc, which already appears to be on its way to a carefully planned obsolescence.

The LP holds a very special place in our hearts here at Gryphon, having been the inspiration for our very first product, the now legendary Gryphon Head Amp. Today, Gryphon continues to support analog playback with the full force of our considerable research and development resources. While the vast majority of self-proclaimed high end manufacturers have ceased to take any real interest in LP playback, Gryphon forges ahead.

The Gryphon Legato phonostage is the fruit of our explorations into the latest circuit topologies, low-noise component breakthroughs and power supply innovations in the service of a vast body of musical treasures that will continue to enlight-

en the lives of dedicated music lovers for years to come.

But it is far more than nostalgia that motivates our ongoing efforts to extract the very best from those black vinyl grooves.

Through our travels and extensive correspondence we are aware of a small, yet significant circle of true vinyl connoisseurs. It is our hope that they will appreciate our meticulous efforts on their behalf in the development of the Gryphon Legato phonostage.

It is to this uncompromising group of music lovers that we dedicate the Gryphon Legato with our heartfelt appreciation for your support.

Flemming E. Rasmussen
President, Gryphon Audio Designs,
Denmark, December 2011

Unpacking

During unpacking and installation, please take care to avoid scratching the Gryphon Legato. Hard, sharp objects such as tools should not be nearby during this process. You might want to remove your wristwatch, rings or other jewellery before handling the preamplifier. Please keep the carton and all packing materials in a dry place for safe future transportation.

The following items are enclosed:

(this list does not apply if the Legato is factory fitted inside Gryphon Sonata Allegro)

- 1 Gryphon Legato phono stage
- 1 Gryphon Legato power supply (with stand alone version)
- 2 AC power cables (with stand alone version with powersupply)
- 2 DC power supply cables (with stand alone version)
- 1 pair of Lemo connectors (with all Legatoversions)
- 1 pair of white gloves
- 1 acrylic polish
- 1 packing list
- 1 purchase registration card

If anything is missing or damaged, please contact your Gryphon dealer immediately.

Installation

In order to minimize any possible risk of electrical interference, do not place the preamplifier directly above or below the power supply. The length of the power supply cables allows you to place them some distance apart. If you wish to place them side by side, please place the power supply to the left of the preamplifier as seen from the front.

Power supply

For each channel, connect a DC connector cable to the socket marked DC OUTPUT on the supply and to the socket marked DC INPUT on the preamplifier. Turn the locking connector clockwise to lock firmly to prevent accidental disconnection.

Each channel has its own On/Off switch located under the unit. For optimum performance, we recommend that you leave the Legato powered up at all times. If you choose to turn the Legato on and off, please remember:

ALWAYS turn the Legato on, BEFORE turning on the power amplifier.

ALWAYS turn the power amplifier off, BEFORE turning off the Legato.

AC Fuses

(Stand alone units with dedicated power supply)

The Legato powersupply has an AC fuse holder for each channel.

100-120V. countries: 800m AT

200 -240V. countries:400m AT

DO NOT REPLACE WITH ANY OTHER FUSE VALUE.

AC Power

The Legato should ideally be connected to a separate AC group independent of other equipment.

The Legato is designed for use with a three-pin AC connection with separate ground, but may in some countries be used with alternative grounding. Your Gryphon dealer or importer will give you further details.

AC Grounding

In order to utilize the AC filtering section of the power supply, connection to ground is essential. Generally, overall performance can be greatly improved with proper grounding. The degree of improvement will depend on local conditions

AC Power Cords

Use only a dedicated AC power cord. Do NOT use loudspeaker cable or other wire not expressly designed to carry high current. Improper cable or cables of insufficient gauge will generate heat and the insulation may melt with disastrous results.

AC cords DO have an audible effect on sound quality, but experiments should be carried out with due consideration to safety.

Power Line Conditioners?

The Legato has its own built-in AC conditioner (each channel). If you use external line conditioners or other devices, we strongly recommend that you listen to the Legato without these devices before making your decision.

Remember to listen for correct sound and not merely different sound.

AC Polarity

Do not run, thin, coiled, extension cords.

The Legato is a true dual mono construction and we must strongly emphasize the importance of symmetrical AC power polarity for each channel. Asymmetrical AC polarity will strongly degrade

soundstage recreation and other important aspects of the Legato performance.

Balanced Cables

The Legato is only made for Balanced operation and failure to make correct termination will diminish performance and may damage the unit.

Pin configuration of Lemo Connectors

For absolutely superior performance, the Swiss made Lemo connector was chosen. 1 Pair is supplied with the Legato.

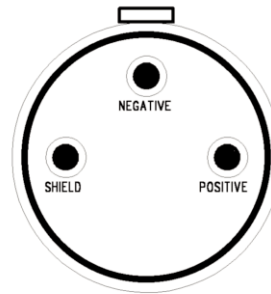
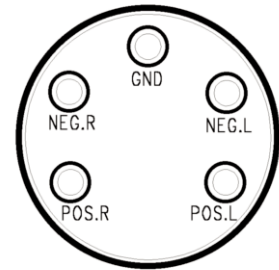


ILLUSTRATION SHOWS CABLE CONNECTIONS AS SEEN FROM INSIDE THE CONECTOR.

Wiring Schematic

EXAMPLE: LEFT CHANNEL



VERY IMPORTANT:
THE SHIELD OF THE CABLE MUST BE INSULATED FROM THE OUTER PART OF THE LEMO CONNECTOR. SHIELD MUST ONLY BE CONNECTED TO THE SOLDERING POINT OF THE LEMO CONNECTOR. NEVER THE TONE ARM

Tonearm Connections

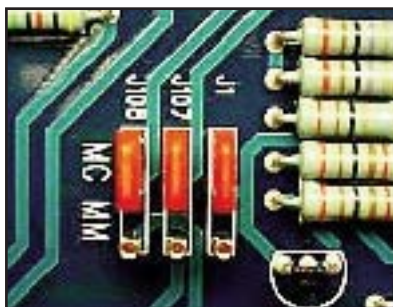
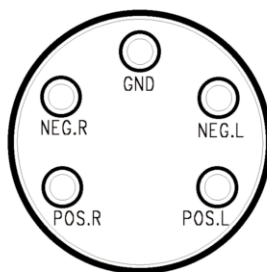


Fig. 1

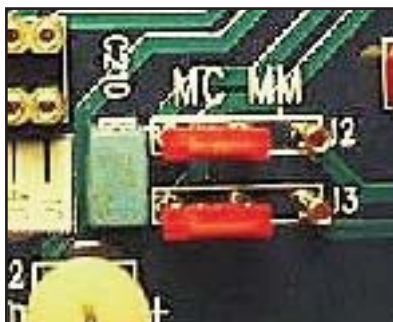


Fig 2

STANDARD CARTRIDGE PIN CONNECTION:

WHITE: POSITIVE LEFT
BLUE: NEGATIVE LEFT

RED: POSITIVE RIGHT
GREEN: NEGATIVE RIGHT

DO NOT CONNECT THE SHIELD AT CARTRIDGE END OR CONNECT NEGATIVE (MINUS) WITH SHIELD AT ANY POINT.

MC or MM?

The Legato must be turned off and cables removed before top plate is removed

The Legato is factory set for Moving Coil cartridges loaded at 80 Ohms, but can be changed to MM 47K by removing the cabinet top plates and relocating 5 straps on the circuit board. Do

not change anything on the impedance load sockets. The MM 47K load is automatic in the MM position.

The straps (red) are located in the center of the Legato circuit board (J1 / J07 / J08 & J2 / J3) The correct positions are marked on the PC board.

See fig. 1 & 2

Grounding

The Ground wire from the tonearm can be connected to the the cabinet grounding posts.

Most Audiophiles have learned that there are no clean cut rules when it comes to efficient grounding of Tonearms.

It pays to experiment and sometimes no grounding will do the trick or the solution may turn out to be very unusual.

Experiment.

Unless you are a wizard with a soldering iron, we recommend that you ask your Gryphon dealer to make a dedicated Legato phono cable.

Legato phono cables based on our Solid silver/Gold Guideline cables can be factory made to your specifications:

Technical Specifications

(Balanced operation)

Signal to Noise ratio:

MM 86 dB Unweighted Ref. 10 mV

MM 90 dB A weighted Ref. 10 mV

MC 68 dB Unweighted Ref. 0.5 mV

MC 72 dB A weighted Ref. 0.5 mV

Gain MC: 68 dB

Gain MM: 38 dB

RIAA tracking: ± 0.1 dB 20 - 20 kHz

THD: 0.01%

Output impedance: 50 Ohms

Input overload margin:

MC 30 mV pp

MM 700 mV pp

RIAA out: voltage swing 60 V pp

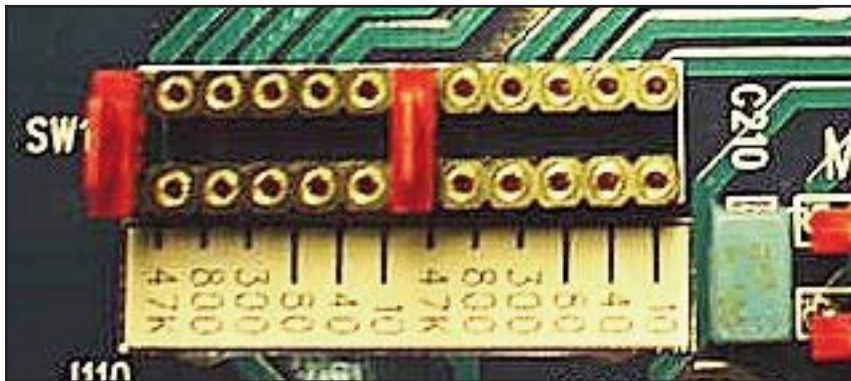


Fig. 3

MC Impedance Selector

Turn off power before removing cabinet top plate.

The impedance selector is a super high grade socket using removeable gold-plated jumpers to secure lasting superior contact. The selector has 6 positions marked on the circuit board.

Position 1	10 Ohm
Position 2	40 Ohm
Position 3	80 Ohm
Position 4	300 Ohm
Position 5	800 Ohm
Position 6	47 kOhm

See figure 3

Custom Loads

Besides these values it is possible to load the cartridge with any impedance between 10 Ohm and 47 kOhm, by inserting resistors in the sockets found on the PC board just left of the impedance loading socket (as seen from the rear) RIN 1/RIN 2. See fig. 4

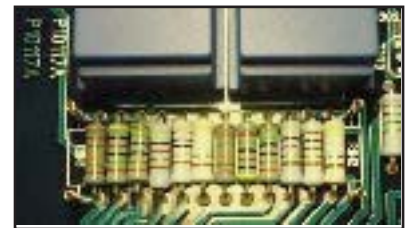


Fig. 4

Use only high quality, precision resistors.

Formula for finding the desired resistor value for custom load

$$\frac{R_{load} \times 23500}{47000 - R_{load}}$$

listening to the "naked" design as it was intended.

Enjoy...

Tweak Alert

In the best Gryphon tradition we have spent a huge amount of time with our prototypes before we release a new product. We are obsessed with what we do and consider ourselves to be open minded and are fascinated by the "Grey area" between logical, technical facts and things we just hear that make no obvious technical sense, we will implement it as long as it does not sacrifice safety or reliability. In the Legato design a number of tweaks can be found and the result is a fine balance that can easily be disturbed.

We strongly advise against any alteration of the original design, it will void the warranty and most certainly not provide more than a difference instead of a real improvement of musical realism. We are fully aware of the fun of playing with AC conditioners, bricks, platforms, cables and so on. We appreciate much of it, but please listen to our intentions before you go ahead and if you do, do yourself (and us) the favor of now and then going back and

Warranty

The Gryphon Legato is warranted against failures arising through faulty workmanship and materials for a period of 5 years from date of purchase. The warranty is not transferable. **This warranty is only valid in the country where the product was purchased.** All claims under this warranty must be made to the distributor in the buyer's country by returning the unit securely packed in the original box with all accessories, postage/freight prepaid and insured. The unit will be repaired or replaced at no charge for parts and labor.

This warranty remains valid only if the serial number of the unit has not been defaced or removed and if repairs are performed only by authorized Gryphon dealers or distributors. It does not cover damage due to misuse, accident or neglect. This warranty is not valid if the operation voltage of the product has been changed. The distributor or manufacturer, Gryphon Audio Designs, Denmark, retains the exclusive right to make such judgement on the basis of inspection.

The retailer, distributor or manufacturer of the Gryphon shall not be liable for consequential damage arising from the use, misuse or failure of this product, includ-

ing injuries to persons or property.

To qualify, the enclosed warranty registration card must be filled out and returned to the manufacturer within 10 days of purchase.

Alternatively, you may choose to register your Legato on our website:

www.gryphon-audio.dk

