

FONOBRIO™

PRECISION PHONO AMPLIFIER (MM/MC)



'One of the best
(and least intrusive)
phono-stages
available'

(R. Gregory, 2009)

The FONOBRIO is radical and without compromise, taking things right to the technical limits and phono reproduction to a new level. It blows away the ground level mists that still blurred a last layer of information sitting in the 'grooved landscape'. Spurred by the accolades the predecessor model FONOVIVO had received, the quest was on to unlock the last secrets of vinyl.

Taking leave from standard voltage regulators, the ultra-precise power supply is more than a thousand times quieter than a very good standard regulated design, ie hum and ripple are at the edge of the measuring range of even the best test equipment. The power supply further couples to the phono stage with an impedance so extremely low no accu-based design could ever have, making it ultra-fast and stable at the same time.



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In addition, the MC stage as part of an equally uncompromising amplification design, consisting of three discrete, mirror-symmetrical, ultra-linear stages, has discrete ultra-low noise transistors, surrounded by ultra-precision, low-noise resistors.

The architecture consists of two separate boards, one for each channel. They are mounted decoupled from the chassis and are shielded from the power supply by a partition. The medical class isolation transformer is further screened by a substantial stainless steel cap mounted on dampers.

The sonic result is stunning. The room that opens before the listener immediately provides a new feeling. It is spacious and filled with crisp air, every object in it has a close-to-touch naturalness, and sounds emerge that must have been covered by a floor of noise before. All of a sudden things begin to move. The rhythm is intoxicating because every little inflexion can be followed. The energy released is incredible. Transients are lightning fast. The music is flowing without a sign of fatigue. And all this from a piece of vinyl...

The FONOBRIO is easy to operate, even though it is rich in features that will prove very useful. There is a separate (switchable) input for moving coil (MC) and moving magnet (MM) cartridges, and for the former there is a 4-pole dip switch accessible from the outside, allowing the configuration of 16 different load impedance values (for unusual cases there is even provision for a dedicated resistor to be inserted in the load circuit). External switches give the choice of doubling the output level in MC operation. Even the level of the output stage can be adjusted internally in three steps.

The FONOBRIO is a declaration of love to the gramophone as a guardian of musical treasures that stand little chance of becoming accessible again in today's music market.

The totality of the many superlative technical features summarized below situate the FONOBRIO in a position apart from pure tube designs on the one hand and pure IC designs on the other, let alone designs using a step-up transformer for MC.

'Like the Dirondo, the Fonobrio produced solid, tightly focused images on a huge, open soundstage' (B. Damkroger, 2006)

'The Ensemble (Fonobrio) also excelled at weaving together low-level ambience cues to portray the character of the original recording venue' (B. Damkroger, 2006)

'There's a poise and delicacy to its presentation, an easy sense of separation that makes the structure and form of the music an open book...' (R. Gregory, 2009)



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MAJOR FEATURES

- Ultra-precise and rock-stable power supply with extremely low output impedance (16 milliohm). Hum and ripple at or below threshold of measuring equipment ($< 1\mu\text{V}$)
- Isolation transformer, medical class IEC II, shielded with resonance damped stainless steel hood
- Mute function when unit is switched on or off
- Mechanically decoupled chassis, providing an anti-microphonic environment for the sensitive electronics
- Phono circuit boards hand-soldered with silver-content solder
- Discrete, mirror-symmetric dual-mono circuitry in three gain blocks with ultra-linear 'class A' output stages. Each channel on a dedicated circuit board.
- Circuitry optimized for high linearity and very low distortion levels, allowing maximum signal resolution
- Active/passive RIAA network for full high-frequency dynamics and precise equalisation across the entire audio frequency band
- Wide frequency band operation and generous overload margins
- Linear frequency curve with infrasonic 12 dB per octave taper (10 Hz -3 dB)
- Separate inputs for MM and MC, with switch-activated mute for open input
- Impedance loading for MC by means of gold-plated piano key switches, accessible from outside (16 values, see separate table).
- Custom positions on PCB for resistance (MC) and capacitive (MM and MC) loading
- Selectable gain for MC stage (24 dB = 16x and 30 dB = 32x) by external toggle switches for left and right channel
- Output stage capable of driving low impedance loads ($> 3\text{ kohms}$)
- Output level internally adjustable (to 75 % or 50 % of full output level)
- Ultra-low noise transistors and resistors (0.1% precision 'military grade', low thermal drift) at critical points of circuitry for excellent S/N ratio, allowing use of low output cartridges.
- High-grade components selected for sonic quality, reliability, and precision e.g. 1% polystyrene capacitors, custom-made for FONOBRIO, ultra-low impedance electrolytic capacitors, ultra-fast soft-recovery diodes, etc.)
- Silver leaded Ensemble PROCAP™ coupling capacitors
- Ensemble Film Shield™ screened internal wiring

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SPECIFICATIONS

Bandwidth	10 Hz - 85 kHz (-3 dB points)
RIAA Accuracy	20 Hz - 20 kHz \pm 1 dB
Line Level Output	Max. 9.5 V _{RMS} Phase correct Tolerating low impedance loads of > 3 kohm Output impedance < 100 ohm
Maximum Input	MC 4 mV MM 60 mV (= 23.5 dB overload margin)
Sensitivity / Gain	MC 250 μ V for 4 mV output : 24 dB gain setting 125 μ V for 4 mV output : 30 dB gain setting MM 4 mV for 640 mV output : 44 dB gain Total maximum gain (MC : 30 dB) : 74 dB
Input Impedance Input capacitance	MC switchable between 16 values (51.7 ohm - 1 kohm) in parallel with 2300 pF custom value insertable internally MM 47 kohms in parallel with 220 pF
Total Hum and Noise (20 Hz - 20 kHz)	MC better than -68 dB, referenced to 0.775 V _{RMS} , <u>un</u> weighted better than -74 dB, A weighted MM better than -80 dB, referenced to 0.775 V _{RMS} , <u>un</u> weighted
THD	< 0.03%, MC input, 24 dB gain setting, Referenced to 0.775 mV _{RMS}
Mains voltage (switchable)	100 V } 115 V } 50-60 Hz 230 V }
Mains fuses	2 x 0.1 A T / 250 V slow-blow for 100 - 230 VAC
Power Switch	115 V neon light (Ba9s bayonet socket)
Dimensions	395 x 315 x 138 mm (15.5"x 12.4"x 5.4") (wdh) 550 x 430 x 350 mm (21.6"x 17"x 13.8") boxed
Weight	8.5 kg (18.5 lbs) net, 12 kg (26 lbs) shipping weight
Warranty	2 years on parts with the exception of faults due to mishandling, unauthorized modification, or overload

HANDMADE IN SWITZERLAND

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