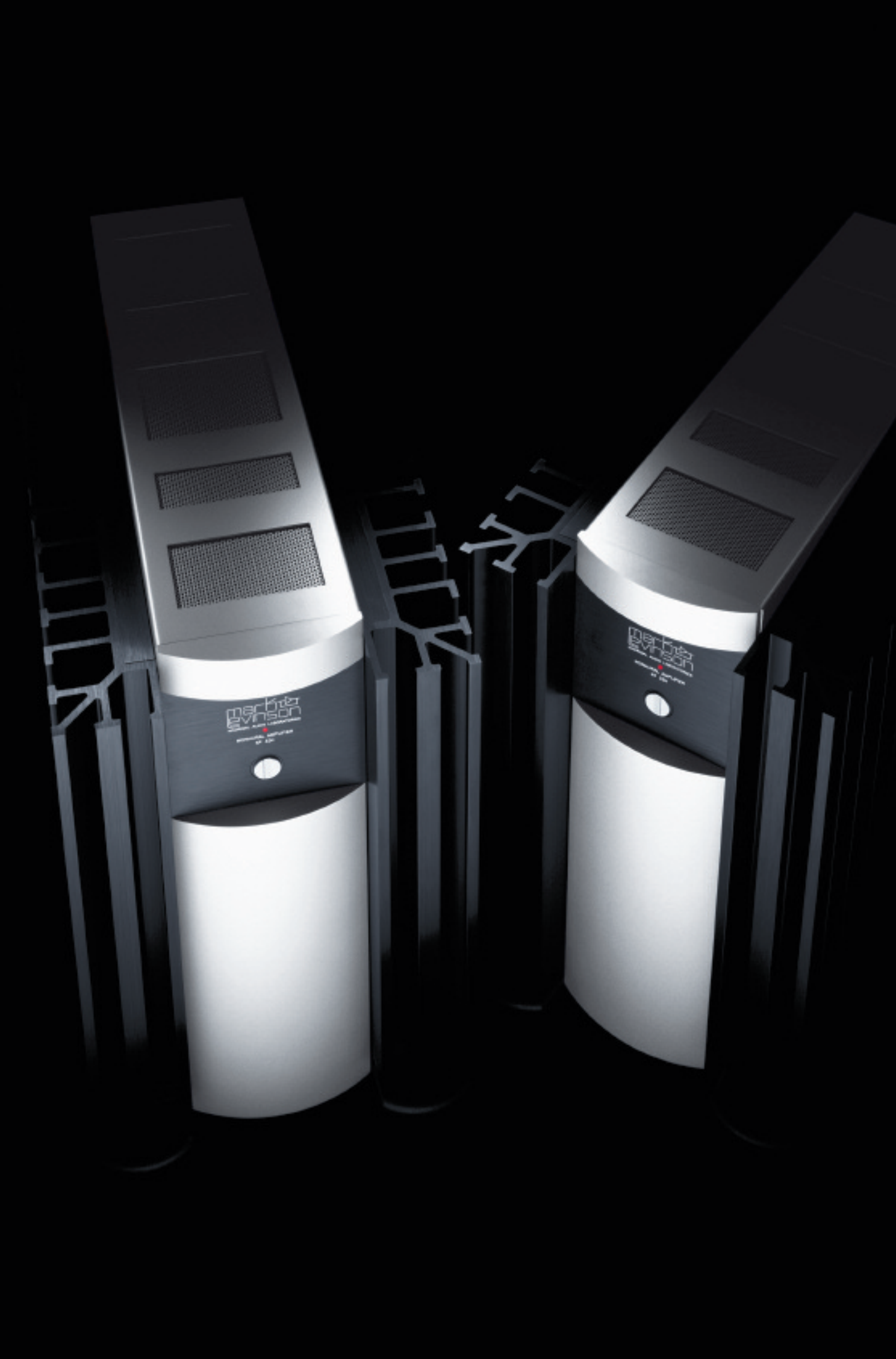
№33H

MONAURAL POWER AMPLIFIER

mark levinson®

MADRIGAL AUDIO LABORATORIES



Nº33H

MONAURAL POWER AMPLIFIER

Each monaural Nº33H weighs in at 175 pounds (over 80 kg) and takes advantage of a vertically oriented industrial design that reduces the floor space the amplifier would otherwise require. Rated at 150 watts into an 8-ohm-load, the Mark Levinson Nº33H delivers extraordinary power to the complex impedances of actual loudspeakers. Each monaural amplifier chassis employs four 60,000 µF capacitors for a total of almost 1/4 Farad of capacitance. A fully balanced power amplifier from input to output, the Nº33H optimizes the reproduction of today's finest sources. It achieves common mode (noise) rejection in the loudspeaker's voice coil, protecting the entire portion of the signal chain for which it is responsible from radiated and other forms of common mode noise.

Technical Background

Fully Balanced Power Supply: The Nº33H uses two independent, bipolar power supplies to support the fully balanced nature of the amplifier from input to output. These are taken from a single 3.417 kVA custom transformer, using multiple taps to maintain the symmetrical nature of the two bipolar supplies. Since each amplifier is monaural, you can count on symmetry at the transformer for the noninverting and inverting sides of the same signal. This stands in contrast to "stereo" amplifiers which share a single transformer between dissimilar amplifier channels, wherein crosstalk through the power supply presents problems.

AC Regeneration: One of the most significant features of the Nº33H amplifiers is the presence of the AC Regeneration system, which siphons off a portion of the ± DC power from the main supply, using it to power an oscillator circuit that generates pure sine wave AC. Having created this absolutely clean AC source, we then rectify it, filter it, and regulate it as you would expect in any high quality power supply. But because the AC power we began with was textbook-perfect, the quality of the resulting ± DC for the sensitive voltage gain stages is unrivaled. In effect, we create our own small power utility for the purposes of feeding the power supply of the voltage gain

stages. The result is the purest possible power for these sensitive stages.

"Double" Balanced Voltage Gain Stages: The incoming signal from the preamplifier is received using a special topology that *eliminates* the customary feedback point on the inverting side of the first stage differential amplifier, providing for a truly balanced impedance at this critical juncture.

Fully Balanced Output Stage: A total of 40 output devices (in two sets of ten complementary pairs) are used in a bridged configuration. Thus the output terminals do not reference ground at all, and the N°33H achieves near-perfect symmetry in output currents resulting in effortless precision and power.

Adaptive Biasing System : This system references *both* the instantaneous voltage and current required by the load and determines the optimal bias at each and every moment. This sophistication makes it impossible to reverse-bias the outputs of any of the current Mark Levinson amplifiers. This greatly reduces junction switch-off transients and allows the amplifiers to achieve the effortless, fatigue-free performance that Mark Levinson amplifiers are known for.

Exhaustive Listening Tests: Extensive listening tests were conducted to evaluate every critical component in the signal path. Hundreds of hours were invested at every stage of the design to ensure that we squeezed every last drop of performance from the design of the N°33H.

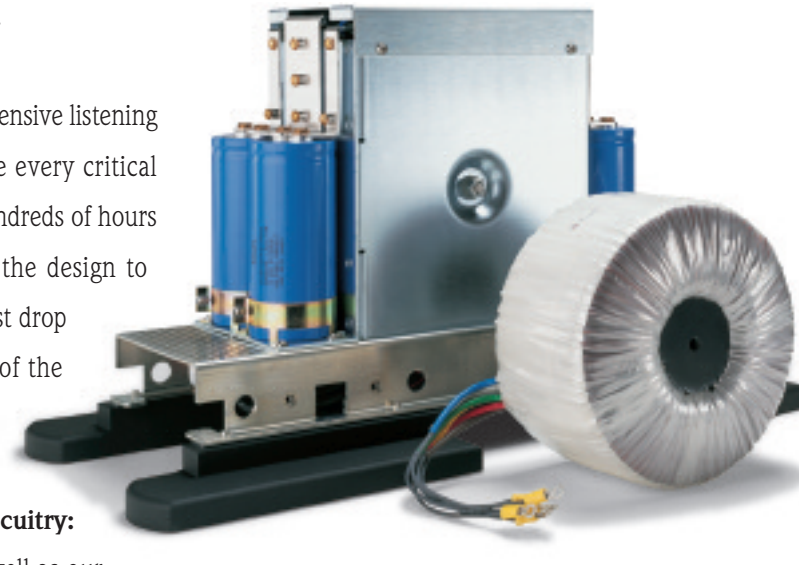
Comprehensive Protection Circuitry: The N°33H power amplifier, as well as our other Mark Levinson amplifiers, will shut themselves down if they sense any of a number of fault conditions which could cause damage to either themselves or to the loudspeakers.

The Sound

The clarity and dynamics of the N°33H Monaural Power Amplifier are quite stunning, particularly to those intimately familiar with the finest electronics. Additionally, the subjective noise floor seems to drop significantly, revealing myriad details in the music and a sense of soundstaging and imaging that is without peer. The N°33H provides all the power and authority of a large amplifier design, while retaining the finesse of a smaller audiophile power amp.

Summary

The N°33H Monaural Power Amplifier is the absolute reference for audiophile listening. It delivers effortless power in an elegant design that conveys the entire musical experience. From the subtlest nuance to the boldest crescendo, the N°33H will remind you why you fell in love with music in the first place.



Custom designed toroidal power supply.

N°33H Monaural Power Amplifier

Rated power output:	150W/ch continuous rms power @ 8Ω 300W/ch continuous rms power @ 4Ω The above power ratings measured as continuous (rms) power from 20Hz–20kHz with no more than 0.3% THD (assuming that the AC mains can deliver adequate current, without its own voltage sagging)
Frequency response:	within 0.2dB from 20Hz to 20kHz
Signal-to-noise ratio (main outputs):	better than –80dB (ref. 1W)
Voltage gain:	26.8dB
Input impedance:	100kΩ (balanced) 50kΩ (single-ended)
Input sensitivity:	1.59V for full rated output
Output impedance:	less than 0.05Ω from 20Hz–20kHz
Power consumption:	typically 540 watts (±5%) at idle typically 210 watts (±5%) in standby
Mains voltage:	100V, 120V, 220V, 230V, or 240V at either 50 or 60Hz, factory set for destination country
Connector complement:	(2) pairs custom binding posts (1) balanced input on XLR (1) single-ended input on Mark Levinson RCA (1) 3.5mm trigger out jack (1) 3.5mm trigger in jack (1) RJ-45 communications port (Mark Levinson Linking™) (1) RJ-11 communications port (Mark Levinson Linking™) (1) captive high current AC mains cord
Overall dimensions:	width: 11" (27.94cm) height: 18.5" (47cm) depth: 22.875" (58.1cm)
Shipping weight:	220lb (100kg) each
	Specifications are subject to change without notice.

Part # 072-17290

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