

N°5805 and N°5802
INTEGRATED AMPLIFIERS



INTRODUCING THE
MARK LEVINSON
N°5805 AND N°5802
INTEGRATED AMPLIFIERS

The N°5805 and N°5802 were created to deliver all of the performance and quality expected from Mark Levinson while implementing state of the art features and efficiencies gained from decades of superlative audio engineering. With a brand new industrial design, fully discrete PurePath circuitry, PrecisionLinkII DAC, MainDrive headphone power, and robust dual monaural Class AB amplification, the N°5805 and N°5802 deliver luxurious fidelity with premium features and flexibility.

Proudly designed, engineered, and precision-crafted in the USA.





INDUSTRIAL DESIGN

Robust materials, lavish finishes and bold geometry are celebrated attributes of Mark Levinson designs. One-inch thick solid aluminum front panels are bead-blasted, black-anodized, and machine contoured to flow seamlessly into the sleek glass display, which itself is recessed into a bead-blasted and clear-anodized aluminum bezel.

Two iconic hourglass knobs are machined with a gently curved profile softly transitioning into a rounded front. Meticulous artistry is evident in the fine details including debossed top cover vents, screen printing behind the glass panel and aluminum Standby and Menu buttons – all resting on matching custom aluminum feet.

DIGITAL AUDIO

The N°5805 and N°5802 offer outstanding digital audio capability through the Mark Levinson PrecisionLinkII DAC. The latest generation ESS Sabre 32-bit D/A converter with jitter elimination circuitry and a fully balanced, discrete current-to-voltage converter form the heart of the digital audio processing stage.

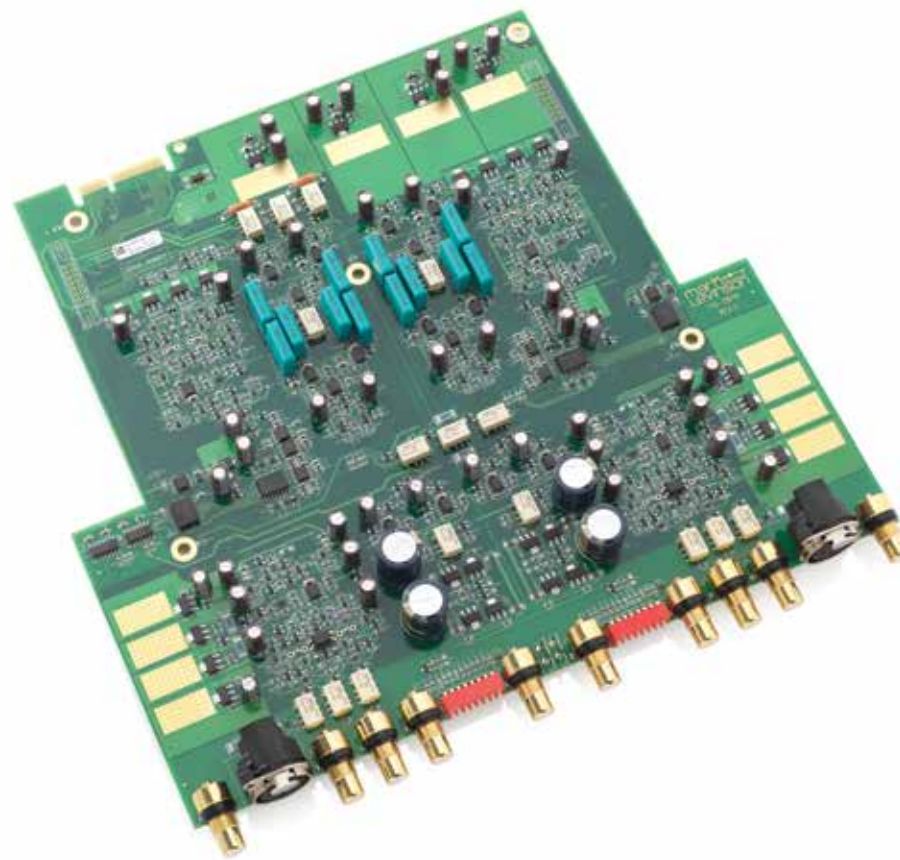
The N°5805 features four digital audio inputs: one coaxial and two optical S/PDIF, and one asynchronous USB for playback of high-resolution PCM (up to 32 bit/384kHz) and DSD (up to 11.2MHz) files. The N°5802 adds an AES input and a second coaxial for a total of six digital inputs.

A Bluetooth® receiver equipped with aptX™ HD enables the highest quality Bluetooth playback available. Both models include full MQA (Master Quality Authenticated) decoding technology, which enables playback of MQA audio files and streams.



CONTROL

System integration and communication ports include Ethernet, USB, RS-232, IR input, and 12V trigger input and output. An internal webpage allows setup, import and export of configurations, and software updates using a standard web browser. In addition, drivers are available for major control systems.



№5805 ANALOG INPUT STAGE

The foundation of the №5805 is its proprietary PurePath circuitry – a fully discrete, direct-coupled, dual-monaural line-level preamp circuitry, for which the Shelton design team has filed two patent requests. A unique single gain stage mated to a digitally controlled resistor network for volume adjustment maintains maximum signal integrity and widest possible bandwidth. Each of its three stereo line level inputs—one balanced XLR and two single-ended, using custom Mark Levinson RCA connectors—has its own individual high-reliability signal switching relays. The MainDrive headphone output employs a preamp output stage specifically designed with the current and power capacity to drive headphones directly in pure Class A, without a separate headphone amp.

A newly designed phono stage features a hybrid gain topology, mating key discrete components from the acclaimed 500 series Pure Phono stage with low-noise integrated circuits for high performance at lower cost. Also like the 500 series, a hybrid active/passive RIAA equalizer employs precision resistors and polypropylene capacitors for exceptional accuracy and sonic clarity. The user can select MM/MC gain and optional infrasonic filter from the setup menu, while capacitive and resistive loading settings are easily accessed from the rear panel.



AMPLIFICATION

The fully discrete, direct-coupled, Class AB amplifier channels get their power from an oversized (500+ VA) toroidal transformer with individual secondary windings for the left and right channels. The voltage gain stage employs a topology directly descended from the acclaimed N°534 amplifier, which is mated to an output stage comprising two high-speed driver transistors operating in Class A and six 260V, 15A output transistors.

Two Thermal-Trak devices in a unique configuration guarantee stable output bias regardless of load or temperature. Four 10,000-microfarad capacitors per channel, located directly on the output stage circuit board, easily provide enough current for a conservative 125W/channel at 8 ohms, nearly 250W/channel at 4 ohms, and stable operation down to 2 ohms. Variable line-level RCA outputs allow system expansion and flexibility.



HIGHLIGHTS

Digital

- 32 bit/384kHz PCM and DSD 11.2MHz capability
- Digital Inputs: 1 x USB 2.0, 1 x coaxial S/PDIF, and 2 x optical S/PDIF
- The N°5802 includes an additional coaxial S/PDIF and an AES/EBU XLR input
- Bluetooth audio input including aptX HD support
- Full MQA decoding

Analog (N°5805 only)

- Analog Inputs: 1 x balanced XLR stereo, 2 x RCA stereo, 1 x RCA Phono MM, 1 x RCA Phono MC
- HT processor pass-thru mode
- Analog outputs: 1 x RCA stereo (variable)
- Headphone output: 1 x 1/4-inch/6.35mm jack (front panel)
- Speaker outputs: 2 pairs high-current binding posts

Control

- Control ports: Ethernet (RJ45), RS-232 (DB9), 12V trigger input/output and IR input (3.5mm jack)
- Webpage setup, configuration import/export, software updates
- Included handheld IR remote control
- Control modules for third-party automation

Other

- EuP compliant/low-power standby
- All-new N°5000 series industrial design
- Made in the USA
- Packaged and sold individually

SPECIFICATIONS

ANALOG LINE STAGE (N°5805 ONLY)

Line Input Impedance	: Balanced (XLR): 20k Ω ; Single-ended (RCA): 10k Ω
Volume Control	: Balanced; voltage mode; digitally-controlled resistor network
Gain	: 8.5dB maximum
Output Impedance	: 55 Ω
Output Overload	: >4.5V RMS
Frequency Response	: 20Hz to 20kHz, \pm 0.03dB; <2Hz to 210kHz, +0.1/-3dB (At unity gain volume setting)
Total Harmonic Distortion	: <0.01%, 1kHz; <0.03%, 20 kHz; 2V RMS output (At unity gain volume setting)
Signal-To-Noise Ratio	: >96dB (20Hz to 20kHz, A-weighted); >93dB (20Hz to 20kHz, wideband, unweighted) (Referred to 2V RMS output, unity gain volume setting)
Input Sensitivity	: 53mV RMS at line input for 2.83V RMS at speaker output, maximum volume setting
System Gain	: 34.5dB, line input to speaker output, maximum volume setting

PHONO STAGE (N°5805 ONLY)

RIAA Frequency Response	: 20Hz to 20kHz, \pm 0.3dB
Infrasonic Filter	: Selectable; 20Hz, 1st order (6dB/octave)

MOVING-MAGNET MODE

Input Resistance	: 47k Ω
Input Capacitance	: Selectable; 20, 70, 120, 170pF
Gain	: 39dB at 1kHz
Total Harmonic Distortion	: <0.01%, 1kHz, 2V RMS output; <0.05%, 20kHz, 2V RMS output
Signal-To-Noise Ratio	: >90dB (20Hz to 20kHz A-weighted, referred to 2V RMS output); >78dB (20Hz to 20kHz, wideband, unweighted, referred to 2V RMS output)
Maximum Input Level	: >190mV at 1kHz; >1.6V at 20kHz

MOVING-COIL MODE

Input Resistance	: Selectable, 37 Ω to 1000 Ω
Gain	: 69dB at 1kHz
Total Harmonic Distortion	: <0.01%, 1kHz, 2V RMS output; <0.06%, 20kHz, 2V RMS output
Signal-To-Noise Ratio	: >71dB (20Hz to 20kHz A-weighted, referred to 2V RMS output); >66dB (20Hz to 20kHz, wideband, unweighted, referred to 2V RMS output)
Maximum Input Level	: >6.5mV at 1kHz; >19mV at 20kHz

DIGITAL-TO-ANALOG CONVERTER STAGE

Output Voltage	: 5.7V RMS at maximum volume/full scale (0dBFS)
Frequency Response	: 20Hz to 20kHz, +0/-0.02dB (192kHz/24 bit signal); 20Hz to 20kHz, +0/-0.05dB (44.1kHz/16 bit signal)
Total Harmonic Distortion	: <0.0025%, 20Hz to 20kHz, at 3V RMS output (192kHz/24 bit signal); <0.003%, 20Hz to 20kHz, at 3V RMS output (44.1kHz/16 bit signal); <0.006%, 90kHz, at 3V RMS output (192kHz/24 bit signal)
Signal-To-Noise Ratio	: >100dB (20Hz to 20 kHz, 192kHz/24 bit signal, A-weighted); >98dB (20Hz to 20 kHz, 192kHz/24 bit signal, wideband, unweighted); >94dB (20Hz to 20 kHz, 44.1kHz/16 bit signal, A-weighted); >92dB (20Hz to 20 kHz, 44.1kHz/16 bit signal, wideband, unweighted) (referred to 2V RMS output)
Sample Rates/Bit Depth	: PCM: 32, 44.1, 48, 88.2, 96, 176.4, 192, 352.8, or 384kHz; up to 32 bits; DSD: Native or DoP; single, double, or quad speed (2.8, 5.6, or 11.2MHz)
Digital Processing	: Full MQA decoding; PCM: Seven user-selectable digital filter settings; user-selectable up-sampling to 352.8/384kHz; DSD: Four user-selectable digital filter settings

HEADPHONE OUTPUT

Total Harmonic Distortion	: <0.04%, 20Hz and 1kHz, 2V RMS output, 30 Ω load; <0.10%, 20kHz, 2V RMS output, 30 Ω load
Output Overload	: >3.3V RMS, 30 Ω load
Signal-To-Noise Ratio	: >91dB (20Hz to 20kHz, A-weighted, referred to 2V RMS output); >87dB (20Hz to 20kHz, wideband, unweighted, referred to 2V RMS output)
Output Impedance	: <2.5 Ω , 20Hz to 20kHz

AMPLIFIER SECTION

Frequency Response	: <2Hz to 20kHz, +0/-0.2 dB; <2Hz to 100kHz, +0/-3dB
Signal-To-Noise Ratio	: >103dB (20Hz to 20 kHz, A-weighted); >100dB (20Hz to 20 kHz, wideband, unweighted)
Total Harmonic Distortion + Noise	: <0.035% at 1kHz, 125W, 8 Ω ; <0.18% at 20kHz, 125W, 8 Ω
Output Power	: 125W RMS per channel at 8 Ω , 20Hz to 20kHz
Output Impedance	: <0.098 Ω , 20Hz to 10kHz; <0.11 Ω at 20kHz
Damping Factor	: >82, 20Hz to 10kHz; >72 at 20kHz (All referred to 8 Ω)

GENERAL

Analog Input Connectors (N°5805 Only):

- 1 pair balanced line-level inputs (XLR)
- 2 pairs single-ended line-level inputs (RCA)
- 1 pair single-ended moving-coil phono inputs (RCA)
- 1 pair single-ended moving-magnet phono inputs (RCA)

Digital Audio Connectors:

- 2 optical digital inputs (Toslink)
- 1 asynchronous USB digital input (USB-B)
- N°5805: 1 coaxial digital S/PDIF input (RCA)
- N°5802: 2 coaxial digital S/PDIF input (RCA)
- N°5802: 1 balanced digital AES/EBU input (XLR)

Output Connectors:

- 1 pair single-ended line-level outputs (RCA)
- 2 pairs loudspeaker outputs (High-current binding posts with banana sockets; accept spade lugs with 1/4"/6.3mm spacing up to 1/8"/3mm thick)

Control Connectors:

- 1 RS-232 port (DB9 connector)
- 1 IR input (1/8"/3.5mm phone jack)
- 1 programmable 12V DC trigger output (1/8"/3.5mm phone jack), 100mA maximum
- 1 programmable 12V DC trigger input (1/8"/3.5mm phone jack)
- 1 Ethernet port (RJ-45 connector)

Mains Voltage:

- 100VAC, 115VAC, or 230VAC, factory set

Power Consumption:

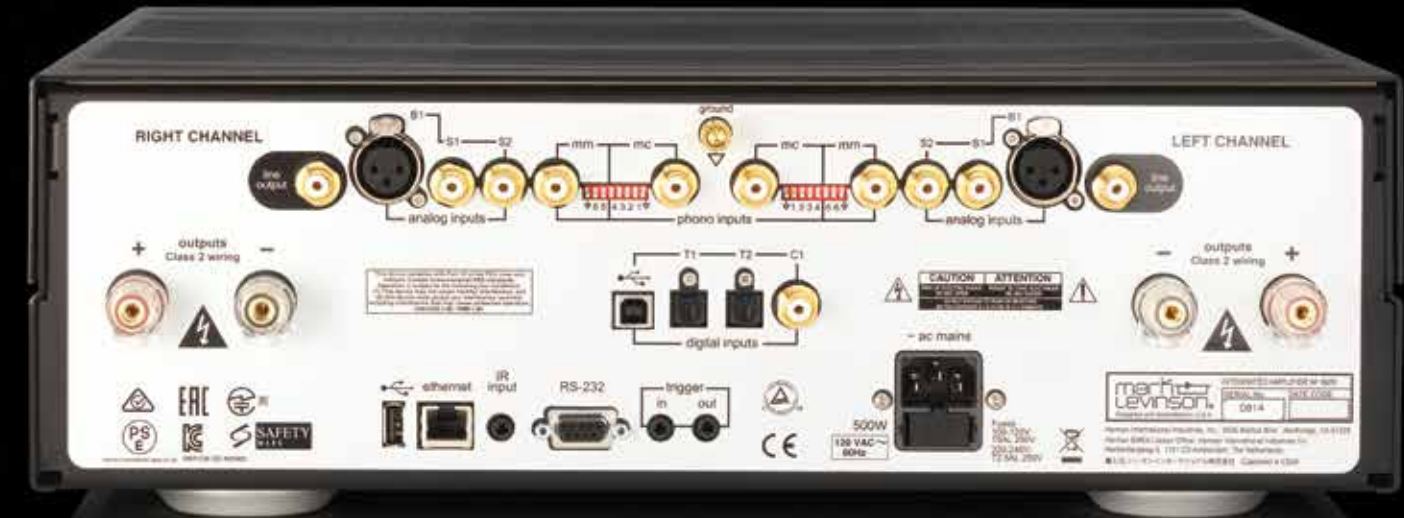
- Standby, "Green" mode: <0.4W
- Standby, "Power Save" mode: 7W
- N°5805: Standby, "Normal" mode: 70W
- N°5802: Standby, "Normal" mode: 45W
- N°5805: Power on, quiescent: 120W
- N°5802: Power on, quiescent: 95W
- N°5805: Power on, both channels at 1/8 rated power: 240W
- N°5802: Power on, both channels at 1/8 rated power: 215W
- Power on, maximum: 500W

Dimensions/Weight (Unit):

- Height: 5.72"/145mm
- Height without feet: 5.25"/133mm
- Width: 17.25"/438mm
- Depth: 19.98"/507mm
- Weight (N°5805): 62 lbs/28.1kg
- Weight (N°5802): 61 lbs/27.6kg

Dimensions/Weight (With Packaging):

- Height: 13.0"/330mm
- Width: 24.0"/610mm
- Depth: 28.0"/711mm
- Weight (N°5805): 73 lbs/33.0kg
- Weight (N°5802): 72 lbs/32.6kg





HARMAN International Industries, Incorporated
8500 Balboa Boulevard, Northridge, CA 91329
marklevinson.com

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