

# DENON



110  
Anniversary

DEFINING AUDIO  
EXCELLENCE  
SINCE 1910

## DENON PMA-A110

### LIMITED EDITION INTEGRATED AMPLIFIER

Celebrating 110 years of audio excellence, Denon is proud to deliver the limited edition Anniversary Series PMA-A110 Integrated Amplifier marking the pinnacle of Denon HiFi technology.

#### HIGHLIGHTS

Defining audio excellence since 1910

Anniversary Edition tuning

80 Watts per channel power output  
(8 ohms, 20Hz-20kHz, THD: 0.07%)

Trusted reputation

A7th Generation Advanced Ultra High Current (UHC)-MOS  
Single-push-pull circuit power amplifier with Schottky barrier diodes

Rear USB-B input for more audio format options

Quad built-in DAC configuration for more audible power

Ultra AL32 Processing for an even smoother musical ride

Pure analog audio reproduction

Premium performance MM & MC phono equalizer amp

Vibration-resistant design with Direct Mechanical Ground  
Construction

Thoughtful amplifier design with short signal paths

Twin transformer with separate coiled wires for audio  
and control circuits

#### YOUR BENEFITS

Denon is proud to release our limited edition Anniversary Series silver graphite flagship PMA-A110 Integrated Amplifier.

All Denon amplifiers boast an exceptional sound signature and this model was specially enhanced by the Denon Sound Master to celebrate our milestone anniversary.

Maximum performance to drive your favourite loudspeakers.

Includes Certificate of Authenticity signed by Denon's Head of Engineering and a 5-year warranty.

Enjoy wide bandwidth sound, from deep bass to detailed highs. Generation after generation refined circuitry to get the finest audio quality.

Hi-Res audio playback up to 384-kHz/32-bit and 11.2-MHz DSD.

4x Burr Brown PCM1795 in a quadruple configuration for optimal high-grade sound. Differential mode cancels out any error for best signal to noise ratio. Experience Hi-Res audio playback and enjoy your favourite songs in the highest quality.

Ultra AL32 Processing is a unique feature with data interpolation algorithm to achieve high-bit, high-sampling output performance. It is also applicable up to 1.536MHz of audio data.

Set Analog Mode on your PMA-A110 to enjoy your music free from any digital interference.

Connect your turntable and enjoy vinyl tracks.

Listen to music with pristine detail and quality unaffected by your listening environment.

Hear pure, superior sound with a condensed relay for Source Direct function from the shortest signal path.

Twin transformer with separate coiled wires for audio

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ULTRA AL32  
PROCESSING





### Denon Celebrates 110-Years of Defining Audio Excellence

Celebrate 110 years of defining audio excellence with the Denon limited edition Anniversary Series silver graphite PMA-A110 integrated amplifier. Denon has been upgrading your expectations in the audio and video industry since 1910 and we are proud to celebrate this milestone achievement with the PMA-A110.

### High Power 80W Integrated Amplifier

Power the most demanding loudspeaker with the Denon PMA-A110 integrated amplifier. Engineered with excellence in mind, the PMA-A110 delivers 80 Watts of power-per-channel (8 ohms, 20Hz-20kHz, THD: 0.07%). This integrated amplifier offers compatibility with the widest range of speaker types and impedances for operational stability.

### Designed with Your Expectations as Our Beginning

Denon's new PMA-A110 was designed to exceed your expectations with previous reference amplifiers. With its limited edition Anniversary Series silver graphite color, aluminum feet, double layer steel transformer plate, and new premium back panel and speaker panels, the PMA-A110 is specially crafted for the most dedicated audiophile. Designed and engineered with masterful precision and refinement in mind, the PMA-A110 offers the most defined audio experience.

### Certificate of Authenticity and 5-Year Warranty

With your purchase of the limited edition PMA-A110, you will receive a Certificate of Authenticity signed by Denon's Head of Engineering. You will receive a special, 5-year warranty.

### 7th Generation Advanced Ultra High Current MOS Single Push-Pull Circuit

The PMA-A110 features a new generation of Advanced UHC (Ultra High Current)-MOS Single Push-Pull circuit design, which combines with a differential 2-stage amplifier circuit to achieve a high-current amplifier able to drive almost any speaker configuration with improved sound quality. To achieve impeccable balance between delicate details of music reproduction and vigor of low frequency sound, the PMA-A110 is capable of delivering a massive current output in a single push-pull configuration to drive even the most demanding speaker and ensure superior linearity in the output stage.

### High Precision Electrical Controls

The PMA-A110 embraces electrical volume, balance and tone controls while preserving the analogue feeling of operation. Clever engineering offers the feel of an analog volume knob while an MCU measures the position of the knob and converts that position to control the master volume digitally. This unique mechanism offers a smoother, more linear control of the master volume by adjusting the curve of the analog volume control in the digital world. The same configuration is also used for Balance and Tone controls.

### High-Grade Audio Components

Denon engineers carefully constructed the amplifier circuit within the PMA-A110 to secure a frequency response of up to 100-kHz during applied use. The volume circuit suppresses noise in the amplifier, achieving high sonic resolution. The PMA-A110 handles a wide, dynamic range of Hi-Res audio sources with tone control and power throughout. In addition, the Quad D/A converter which uses the Burr Brown PCM1795 chip operates in a quadruple configuration for optimal high-grade sound. Each channel has two PCM1795 chips working in a different mode to achieve the highest accuracy and best signal to noise ratio.

### USB-DAC supporting 11.2-MHz DSD and 384-kHz/32-bit PCM

To accurately synchronize its digital circuits, the PMA-A110 provides a USB-DAC input for Hi-Res audio functions that support Hi-Res up to 11.2-MHz DSD and 384-kHz/32-bit PCM input signals. Crafted with exceptional quality, the DAC suppresses jitter and ensures optimal precision in D/A conversion. In addition, the DSD transmission methods support Wasapi, ASIO native playback and DSD Audio over PCM Frames (DoP). The D/A converter used in the PMA-A110 is the same 384-kHz/32-bit and DSD capable premium DAC used in the DCD-A110 to deliver a clean, high-grade sound.

### Ultra AL32 Processing with 384-kHz/32-bit Support

The PMA-A110 is equipped with Ultra AL32 Processing, the latest in analog waveform reproduction technology from Denon. Ultra AL32 Processing utilizes data interpolation algorithms and also supports Hi-Res 384-kHz/32-bit PCM signal input. These algorithms interpolate points that should exist before and after the points in large quantities of data to achieve a smooth waveform that is close to that of the original signal. These algorithms upsample the bandwidth from the original content, smoothing out the waveform and improving sound reproduction.

Ultra AL32 Processing doubles the processing bandwidth from the previous generation upsampling 384-kHz content to 1.536-MHz. By carefully restoring data that was lost during digital recording, the resulting playback sound is highly detailed, free of interference, accurately localized, richly expressive in the lower range, and beautifully faithful to its original sound.

### DAC Master Clock Design

To accurately synchronize digital circuits and the four audio DACs, the PMA-A110's Master Clock Design adopts a Dual Low Phase Noise Oscillator which positions the master clock immediately adjacent to the D/A converters (DAC) suppressing jitter and ensuring optimum precision in D/A conversion.

In addition, the quality of the clock, which becomes the reference for semiconductor operation, is extremely important for ensuring that the digital audio circuitry performs at its maximum potential. The PMA-A110 employs a clock oscillator to dramatically reduce phase noise that is can cause displacement of frequencies. The PMA-A110 is further equipped with two clock oscillators, one for each sampling frequency (44.1-kHz and 48-kHz), that can be switched between the frequencies to thoroughly suppress jitter.

### USB-B, Optical and Coaxial Digital Inputs

The PMA-A110 features a USB-B input to directly connect a computer and supports PCM signal 384-kHz/32-bit and 11.2-MHz DSD. Use the USB-B input to listen to Hi-Res audio recording from an audio source on your computer in native mode. You can also take advantage of three Optical inputs and one Coaxial input to support PCM 192-kHz/24-bit. These digital inputs improve sound quality of your TV audio, Blu-ray, media players and more.

### Digital Isolator and Pure Analog Mode

Combining the best of both the analogue and digital world, the PMA-A110 is equipped with a high-speed digital isolator circuit between both sections to avoid any interference from the digital world in the analogue domain. The PMA-A110 also features three independent power supplies to ensure complete isolation for each section and avoid any interference. When the PMA-A110 is set to Pure Analog Mode it turns off all digital circuits for the perfectly clear sound reproduction of an analog input signal. Pure Analog Mode also turns off the fluorescent display, allowing the PMA-A110 to operate as a purely analogue amp (during Pure Analog Mode, USB-B, coaxial digital, and optical digital inputs are disabled) and remove any electrical disturbances that may adversely effect your listening experience.

### Robust power supply circuitry

The PMA-A110 is equipped with two transformers that have been mounted facing opposite directions in a leakage cancelling (LC) mount system to cancel mutual influences of magnetic flux, a source of noise, leaking from the transformers. Denon's new, custom-designed, powerful large-capacity electrolytic capacitors have been used for rectification, and low-loss, low-noise, high-speed Schottky Barrier Diodes have been used in the rectifier circuitry. This ensures a sufficient supply of clean current. To achieve a "simple & straight" circuit configuration, the connection unit between the diode unit and the block capacitor has been removed to drastically shorten the current supply line to the power amp. Extremely thick OFC wiring material has been used for the power line to reduce impedance

### MM and MC Phono Equalizer

The PMA-A110 includes a phono input that supports both MM and MC cartridges for complete enjoyment of your entire vinyl collection. The PMA-A110 phono equalizer is a CR type that is superior sonically to the NF type phono equalizer. It is exceptionally stable in the high frequency range and is able to reproduce superior sound especially when a high-quality cartridge like the DL-A110 is used.

### External pre-amp input terminals

The PMA-A110 provides "EXT.PRE" input terminals – fixed gain inputs – that can be used for connecting an external pre-amp and using the PMA-A110 as a power amp. This is convenient when connecting an A/V amp via its pre-outs so that the listening space with the same front speakers can be used as a home theater.

### Gold-plated speaker terminals

The PMA-A110's speaker terminals are gold plated to prevent corrosion over time and maintain reliable, long-term connections. Thick spades and banana plugs are also supported.

| Technical Information     |  |                                   |                              |
|---------------------------|--|-----------------------------------|------------------------------|
| Power Amplifier Section   |  | General                           |                              |
| Rated Power               | 80W + 80W<br>(8 ohm, 20Hz-20kHz, THD: 0.07%) | Power Supply                      | AC 230V, 50/60Hz             |
|                           | 80W + 80W                                    | Power Consumption                 | 400W                         |
| Total Harmonic Distortion | 0.07%<br>8 ohms, 20Hz - 20kHz                | Standby Consumption               | 0.2W                         |
| Input Sensitivity MM      | 2.5 mV / 47 kohm                             | Maximum Dimensions<br>(W x D x H) | 434 x 450 x 182              |
| Input Sensitivity MC      | 200 µV / 100 ohm                             | Carton Dimensions<br>(W x D x H)  | 577 x 560 x 325              |
| SN Ratio MM/MC            | 84 dB / 72 dB                                | Weight in kg                      | 25 kg                        |
| Input Sensitivity         | 135 mV / 17 kohms                            | Weight in kg (Packaging)          | 30.2 kg                      |
| Sign to Noise Ratio       | 101 dB                                       | SAP Code/EAN                      | PMAA110GSE2<br>4951835073926 |
| RIAA Deviation            | 20Hz - 20kHz +/-0.5dB                        |                                   |                              |
| Tone Controls             |  |                                   |                              |
| Bass                      | Yes  |                                   |                              |
| Treble                    | Yes  |                                   |                              |
| Balance                   | Yes  |                                   |                              |

| Ports |                                |           |
|-------|--------------------------------|-----------|
| In    | Phono (MM / MC)                | x1        |
|       | Digital IN: USB-B / Opt / Coax | 1 / 3 / 1 |
|       | Audio Inputs                   | x5        |
| Out   | Audio outputs                  | x1        |
|       | Headphone Jack                 | x1        |
|       | Speaker Terminal               | 2         |