



## PMA-1600NE

INTEGRATED AMPLIFIER WITH DAC-MODE

# HIGH QUALITY INTEGRATED AMP REPRESENTING A NEW ERA OF AUDIO ENJOYMENT

### HIGHLIGHTS

- 2 x 140 W (4 ohm) output
- Advanced Ultra High Current (UHC)-MOS Single Push-Pull Circuit Power
- Rear USB-B input
- Digital isolator to eliminate high-frequency noise on the USB-B or digital inputs
- FL display for source and sample rate indication
- Analog AMP Mode switching off digital audio circuitry and display
- Advanced AL32 Processing Plus; DAC Master Clock Design
- Direct Mechanical Ground Construction
- Chassis construction with 6 independent blocks
- Leakage-cancelling-mounted twin transformers
- Main transformer with separate power supplies for analogue and digital circuits
- 2 Digital Optical and 1 Digital Coaxial inputs; MM & MC Phono Equalizer Amp
- Available in Premium Silver and Black

### YOUR BENEFITS

- Enough power even for big rooms
- Wide bandwidth sound from deep bass to detailed highs
- High Resolution Audio playback up to 384 kHz / 32 bit and 11.2 MHz DSD
- Enjoy all sources without any unwanted electric noise
- Easily capture most important information
- Pure analogue audio reproduction
- Digital recordings beautifully faithful to the original sound
- Minimizes unwanted vibration
- Eliminates noises between the circuits
- Minimises the leaking of magnetic flux for noise-free audio reproduction
- Preserves audio signal purity
- Ready for music from all sources
- Perfectly matching the DCD-1600NE Super Audio CD Player

Advanced Ultra High Current MOS Single Push-Pull Circuit

The amplifier features Advanced UHC (Ultra High Current)-MOS technology that utilizes a minimum number of high-current amplifier elements to balance advanced speaker drive capabilities and improved sound quality. Advanced UHC-MOS is an ideal amplifier whose power supply performance is superior to that of bipolar transistors and incorporates the sound quality advantages of MOS-FETs. The Advanced UHC-MOS is provided in a single push-pull configuration that eliminates deviations in the amplification stage and balances high power with delicate musical details. This circuit masterfully reproduces the full sonic range, from the delicate musical nuances to the powerful climaxes of rich musical expression.

Advanced AL32 Processing Plus supporting 384-kHz/32-bit PCM input

For digital input, the PMA-1600NE employs Advanced AL32 Processing Plus, the latest version of Denon's analogue waveform reproduction technology which utilizes unique data interpolation algorithms and also supports high-resolution 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. 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 the original sound.

Leakage-cancelling-mounted twin transformers

Two transformers have been connected in parallel to dramatically improve electrical and magnetic characteristics. The Leakage Cancelling (LC) mounting system, a method of cancelling mutual magnetic influences, has been used to minimise the leaking of magnetic flux, a source of noise inside the amp. The transformers were mounted with a plate between them and the chassis. Unlike conventional models, this plate is dual-layered. A combination of special resins and vibration-resistant materials has also been used to produce a floating effect that prevents adverse influences from affecting sound quality.

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

The PMA-1600NE provides USB-DAC functions that support high-resolution up to 11.2-MHz DSD and 384-kHz/32-bit PCM input signals. DSD transmission methods support ASIO native playback and DSD Audio over PCM Frames (DoP). Since asynchronous transfer is controlled by the PMA-1600NE's master clock rather than the clock of a computer the transfer is free of jitter. The D/A converter used in the PMA-1600NE is the same 384-kHz/32-bit and DSD capable top class DAC used in the DCD-1600NE to deliver a clean, high-grade sound.

6-block chassis configuration & Direct Mechanical Ground Construction

The PMA-1600NE's chassis is configured of six independent blocks that house the phono equalizer and input circuitry, volume control circuitry, USB-DAC circuitry, amplification circuitry, power section, and the control section. The chassis constructed with 1.0mm thick steel plates protects the signal circuits from external vibration and eliminates the adverse effects of mutual interference among the circuits. The power section has been positioned in the center of the PMA-1600NE. With heat sinks on both sides, this construction of well-balanced mass is in an ideal location to prevent unwanted vibration from affecting sound quality. In addition, the feet supporting the heavy weight of the power transformer, heat sinks, and chassis are made of ABS resin with rigid rib construction.

System remote controller and clear view front display

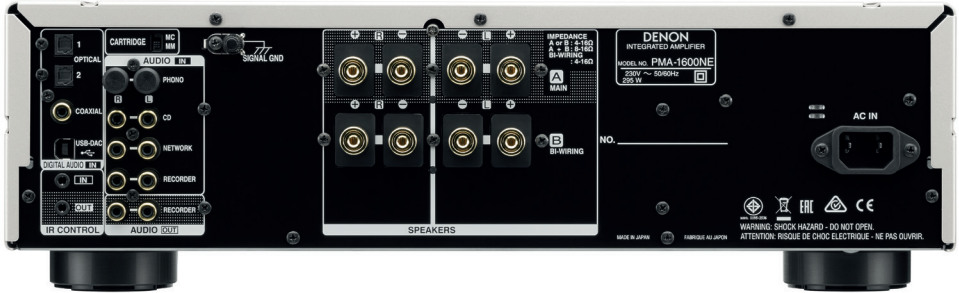
The PMA-1600NE comes with a system remote control unit that can also operate the DCD-1600NE and other Denon CD players and network audio players. The low noise FL display on the product front panel gives source and sample rate indication.

Digital isolator and Analog Mode

The PMA-1600NE is equipped with a high-speed digital isolator to eliminate adverse influences on sound quality caused by high-frequency noise from a USB-connected computer or from the PMA-1600NE's digital inputs. Since data is transferred magnetically via coils embedded in an IC chip, the input and output sides are electrically isolated. By isolating the signal line between digital audio circuitry and the D/A converter, adverse influences of high-frequency noise on analogue audio circuitry after the D/A converter are eliminated. The PMA-1600NE also adopted a dedicated secondary winding in power transformer for the digital circuitry to shut out noise from the power source. During analogue audio playback, the Analog Mode can be used to turn off power to the dedicated digital power source and completely stop operation of the digital input circuitry to avoid any high frequency influence to the analogue section. Analog Mode also turns off the fluorescent display, allowing the PMA-1600NE to operate as a purely analogue amp (during Analog Mode, USB-B, coaxial digital, and optical digital inputs are disabled).

MM/MC phono equalizer

The PMA-1600NE includes a phono equalizer that supports input from both MM and MC cartridges. This phono equalizer has high gain, and as loops in the circuit board pattern can cause adverse effects on sound quality, the "simple & straight" design represents a significant improvement. On the PMA-1600NE, the MM/MC toggle switch was changed from a push type to a relay type, which shortens the pattern on the circuit board and makes signal loops smaller, allowing delicate analogue signals to be amplified with greater purity.



Technical information			
Power amplifier section		Tone control	
Rated output	70 W + 70 W	Treble	± 8 dB at 10 kHz
	(20 Hz - 20 kHz, 8 ohms, T.H.D. 0.07%)	Bass	± 8 dB at 100 Hz
	140 W + 140 W	General	
	(1 kHz, 4 ohms, T.H.D. 0.7%)	Power supply	AC 230 V, 50/60 Hz
Total harmonic distortion	0.01% (rated output -3 dB, 8 ohms, 1 kHz)	Power consumption	295 W (Standby 0.2 W)
Input sensitivity / Impedance		Dimensions (W x H x D)	434 x 135 x 410 mm
Phono MC	0.2 mV/100 ohms	Weight	17.6 kg
Phono MM	2.5 mV/47 kohms		
Line	125 mV / 47 kohms (Source Direct: OFF)		
Signal-to-noise ratio			
Phono MC	74 dB (0.5 mV input)		
Phono MM	89 dB (5 mV input)		
Line	108 dB		

EAN	PMA1600NEBKE2	4951035058657	Black
	PMA1600NESPE2	4951035058640	Premium Silver
UK	PMA1600NEBKE2GB	4951035060087	Black
	PMA1600NESPE2GB	4951035060094	Premium Silver

Ports		
IN	Phono (MM/MC)	x 1
	Audio input (incl. Phono)	x 4
	Digital Optical	x 2
	Digital Coaxial	x 1
	USB-B	x 1
OUT	Rec output	x 1
	Speaker out (Bi-wiring)	A / B