A-9555

Integrated Digital Amplifier

ONKYO
IMAGINATIVE SIGHT & SOUND

VL DIGITAL RI

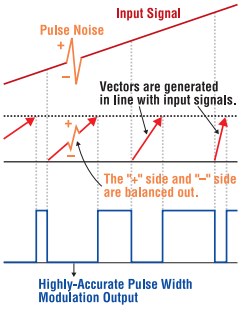
Available in Gold

Ensuring Higher Music Reproduction through Dedicated Audio Engineering

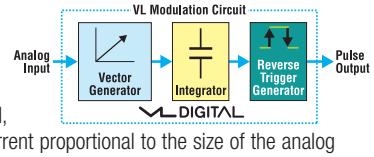
Digital amplification enables significant power efficiency savings and supports smaller, more compact designs—obvious benefits for today's home lifestyles. However, at Onkyo, we believe that these benefits should not come at the expense of the most important consideration: sound quality. With the A-9555 integrated digital amplifier, sound quality takes precedence over all else. By using Onkyo's exclusive Vector Linear (VL) Digital technology to remove any spike noise before it introduces errors into the inversion timing, it is possible to get a highly accurate analog-to-digital conversion. Also, at the heart of the A-9555 is a Pure Stream Power Supply—essentially a large power transformer—that ensures that you always have the on-demand power for the clarity and detail of a range of musical genres. By integrating the fundamentals of audio amplification with the potential of digital amplification, the A-9555 is a revelation in superior audio reproduction.

Pulse Width Modulation (PWM) and Onkyo's Vector Linear (VL) Digital Technology

PWM is the most commonly method of amplifying audio signals, thereby resulting in accurate analog-to-digital conversion. However, a digital amplifier generates a lot of "noise spikes" from sources external to the modulator circuitry. This spike noise introduces errors into the inversion timing, making accurate conversion into pulse widths impossible. So, to further improve the precision of our digital amplifiers, we've had to push even further. Our response is a highly accurate analog-to-digital conversion circuit—VL Digital—that is unaffected by noise in the analog signal.



Onkyo's VL Digital technology comprises a vector generator, an integrator (like a charger) and an inversion trigger generator. When the analog input signal is received, the vector generator outputs a current proportional to the size of the analog input. This current is sent to the integrator, where it is "charged." When the charge quantity reaches a specified value, the trigger operates and inverts the output pulse. Circuits charge and invert alternately, performing pulse width modulation proportional to the analog signal.



The upper and lower portions of the spike noise waveform are symmetrical, so they have the same area. Therefore, if the analog signal contains spike noise, their charge quantities will cancel each other out. This will ensure accurate pulse width modulation at all times. Onkyo's third-generation VL Digital technology includes an inverted Darlington circuit that goes beyond earlier versions to accurately produce a current flow based on the input voltage.

Optimum Gain Volume Circuitry

Conventional volume attenuation methods must initially drop a signal close to the noise floor at low volumes. Even though the signal is only tainted with a little noise, the amount increases when the signal is amplified. Onkyo's Optimum Gain Volume Circuitry adjusts the gain so that less than half the amount of attenuation is necessary. This signal never comes close to the noise floor, and thereby eliminates the possibility of noise contamination that plagues conventional volume-attenuation designs.

Pure Stream Power Supply for Superior Sound Quality

Even though digital amplifiers are far more efficient than analog amplifiers, Onkyo's primary objective is to produce a sound that we can actually "feel," not merely hear. For that very purpose, the A-9555 includes a large-capacity transformer for the lowest possible impedance and superior transient response. Even though digital amplifiers are not susceptible to power supply voltage fluctuations, power supply performance requirements are as equally as demanding as analog amplifiers. You will find few other digital amplifiers grounded in this concept.

Discrete Phono Equalizer for Superior Sound Quality

In typical phono equalizers used up to now, the NF-type (negative feedback) has been most widely used. With this method, as more negative feedback is applied at higher frequencies, transient response deteriorates and the sound quality suffers as a result. However, the NF-type enables a higher signal-to-noise ratio and a wider dynamic range. With a less commonly used phono equalizer, the CR-type, it is possible to get an excellent transient response. With the A-9555's onboard phono equalizer, it is possible to keep negative feedback uniform over the whole frequency range. The A-9555's phono equalizer combines the benefits of both the NF-type and CR-type phono equalizers—a high signal-to-noise ratio, a wider dynamic range and excellent transient response—to produce exceptional sound quality.

Thick, Low-Impedance Copper Bus Bars for Perfect Grounding

Electricity stored in an amplifier's condenser is outputted via an electric power line.To provide continuous output at full-power, a digital amplifier requires a large, stable flow of current. Any loss of power at the output stage becomes a hindrance to the instantaneous flow of that current. That's why we use thick copper bus bars on the A-9555, to achieve an extremely low level of impedance. Printed circuit boards, by contrast, typically use beaten copper for their power lines. Because this beaten copper is extremely thin, it creates far more impedance. Even if it were the same width as the copper bus bars, a printed circuit board would yield much more impedance. So, if you want rock-solid power output at virtually any volume, the A-9555 won't let you down.

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Features

- 200 watts per channel minimum into 4 ohms, 1 kHz, JEITA
- Exclusive Vector Linear (VL) Digital technology
- Optimum Gain Volume Circuitry
- Pure Stream Power Supply
- All discrete output stage circuitry
- Low-impedance, thick bus plate
- Audiophile-grade capacitor
- Precision motor-driven volume control
- Tone control (Bass, Treble, Loudness On/Off)
- Pure direct mode
- Discrete phono equalizer circuitry
- 6 audio inputs and 2 outputs
- Phono input
- High-rigidity, anti-resonant chassis
- Aluminum volume and selector knobs
- Speaker A/B posts
- Banana plug-compatible speaker posts
- Headphone jack
- Heavy-duty power cord (inlet type)
- Compatible with RI Dock for the iPod
- RI (Remote Interactive) remote control

RI (Remote Interactive) remote

SPECIFICATIONS

Amplifier Section

Power Output	200 W/Ch (4 Ω, 1 kHz, JEITA)
Dynamic Power	230 W + 230 W (3 Ω, Front) 200 W + 200 W (4 Ω, Front) 120 W + 120 W (8 Ω, Front)
Total Harmonic Distortion	0.08 %
Damping Factor	25 (Front, 1 kHz, 8 Ω)
Input Sensitivity and Impedance	
Phono MM	2.5 mV/50 kΩ
CD	200 mV/50 kΩ
Output Level and Impedance	
Rec out	200 mV/2.2 kΩ
Phono Overload	70 mV (MM, 1 kHz, 0.5 %)
Frequency Response	10 Hz-60 kHz (+ 1, - 3 dB, CD)
Tone Control	+ 10 dB, - 10 dB, 100 Hz (BASS) + 10 dB, - 10 dB, 20 kHz (TREBLE) + 10 dB, 50 Hz (LOUDNESS) + 2 dB, 10 kHz (LOUDNESS)
Signal-to-Noise Ratio	100 dB (CD, IHF-A), 70 dB (Phono, IHF-A)
Speaker Impedance	4 Ω-16 Ω

General

Power Supply	AC 120 V, 60 Hz or AC 220-230 V, 50/60 Hz
Power Consumption	110 W
Standby Power Consumption	0.3 W
Dimensions (W x H x D)	435 x 148 x 431 mm
Weight	13 kg

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