

C 326BEE Stereo Integrated Amplifier



> POSITIONING

The NAD C 320 series of amplifiers have always punched far above their modest weight. Combining the highest levels of audio engineering with an extensive feature list, and more than adequate power for all but the most ambitious systems, the C 326BEE keeps the concept of affordable hi-end alive and well. **With the very high dynamic power and low impedance drive capability of NAD's proprietary PowerDrive circuit, the C 326BEE is able to accurately control even difficult to drive loudspeakers while sounding musical, detailed, coherent and relaxed.**

The C 326BEE is the latest in NAD's range of affordably priced, yet very high performance Stereo Integrated Amplifiers. Neatly slotted in between our most affordable C 315BEE and more powerful C 355BEE, the C 326BEE boasts many upgrades and refinements taken directly from the highly acclaimed NAD Masters Series M3 Amplifier. These include application of Bjorn Erik Edvardsen's innovative and patented Distortion Canceling Circuit in the output stage and BEE Clamp in the power supply. An improved tone control circuit and revised PCB layout has reduced distortion and noise to unprecedented levels. Taken together, these improvements mark a sharp upturn in performance that must be heard to be fully appreciated!

> FEATURES



- 50W x 2 Continuous Power into 4 ohms and 8 ohms
- 100W, 150W, 200W IHF Dynamic power into 8, 4 and 2 ohms, respectively
- PowerDrive™ circuit
- NAD SR 8 Full System Remote control
- Headphone socket
- Front panel Media Player (MP) input for attaching portable MP3 Player
- Relay Input Switching
- Holmgren Toroidal Power transformer
- 7 Line inputs, including two tape in/outs
- All discrete circuitry
- Short signal path from input to output
- All sockets Gold plated
- Tone controls defeat switch
- Main-amp input & pre-amp outputs
- Subwoofer (mono) Out
- Soft Clipping™
- IR Input/Output
- 12 volt trigger out
- Detachable IEC Power Cable
- <1W Standby Power Consumption
- Free of lead and other environmentally dangerous substances

> DETAILS

Features

The C 326BEE is fully remote controlled and comes supplied with the NAD SR 8 system remote control. The remote control features an ergonomic form, with large buttons that are differentiated by shape and position, to make operation intuitive and enjoyable. The SR 8 will also operate many other NAD products such as CD players, tuners, etc. Flexibility is another NAD strong point. The C 326BEE has 7 line inputs and the pre-amplifier section can be separated from the power amplifier for easy upgrades or adding ancillary equipment. Thus the C 326BEE can be expanded to meet future system needs.

The C 326BEE sports a pre-amp output: Many systems benefit from the use of multiple power amplifiers for "Bi-Amping" (using separate power amplifiers to drive the bass and treble section of a loudspeaker). continued>



> DETAILS

Additionally, there are two monophonic Subwoofer OUT that can be connected to powered subwoofers - an increasingly popular option.

For remote on/off switching of ancillary components in a system, such as power amplifiers or active speakers, the C 326BEE is equipped with a 12V-trigger system. When switching the amplifier on, the 12V-trigger output is also activated which in turn can activate a 12V-trigger input switching on the remote devices. Besides the 12V-trigger, the C 326BEE also has rear panel IR IN and OUT.

It is fashionable to omit tone controls nowadays: However, provided that the tone controls are properly designed, they can be really useful tools in making improvements to the overall sound. The C 326BEE tone controls only work at the frequency extremes leaving the critical mid-band essentially unaltered. The tone control circuits can be completely bypassed by using the Tone Defeat control button. The C 326BEE also incorporates NAD's acclaimed switchable "Soft Clipping" circuit, which significantly reduces the risk of damage to loudspeakers due to prolonged high power operation.

Design: PowerDrive

The C 326BEE also benefits from NAD's proprietary PowerDrive circuit topology, now well established and used throughout the NAD product range. The PowerDrive topology allows the C 326BEE to deliver maximum performance under virtually any circumstance, independent of the loudspeakers it is driving. The circuitry automatically senses the impedance characteristics of the loudspeaker and will then adjust its power supply settings to best cope with that specific load. PowerDrive topology is a practical approach to enable an amplifier to easily deal with musical dynamics and difficult speaker loads. Thus we have the highly desirable characteristics of high dynamic power and low impedance drive capability in one affordable package.

The C 326BEE has the lowest levels of distortion and noise available in its price class and is easily capable of embarrassing far more expensive products. To prove it, NAD uses Full Disclosure Power (FDP) - the most demanding criteria for performance measurement. FDP specifies distortion under the most extreme conditions of low impedance loads and frequency extremes rather than the simple and easy 1kHz @ 8 Ohms test quoted by many of our competitors. We use this stricter performance criterion because it more closely matches the demands of real music and real loudspeakers. Maintaining specified distortion at 4 Ohms and at 20Hz and 20kHz is several orders of magnitude more difficult to achieve than the simple 8 Ohms and 1kHz test.

NAD also takes a stand against the meaningless "brochure power" touted by many of our competitors by offering Full Disclosure power specs. We specify minimum continuous power, across the entire audible range of frequencies, at rated distortion, for both 8 and 4 Ohms with all channels driven simultaneously. Perhaps even more importantly, we also specify Dynamic Power at 8, 4, and

even 2 Ohms, which better describes the way the amplifier will perform in the real world, with musical signals and reactive loudspeaker loads.

Less Distortion = More Music

Noise and distortion mask the fine details of a musical recording robbing musical texture and dimension and replacing them with non-musical artifacts. NAD has spent the last 35 years perfecting our designs to have the lowest distortion and highest power in its price class. This cannot be overstated! Our competitors often rate distortion at only 80% of rated power, and even then can't match our very conservative spec of 0.009% at any frequency within the range of human hearing. Our noise spec is often 10dB (100 times!) less than that of competing amplifiers. This is far from a trivial difference as fine detail and nuance (micro dynamics) are often obscured by noise in lesser amplifiers, robbing a performance of that illusive sense of 'realism'. It is that exciting feeling of being there at the live performance.

But even the most carefully reported specs cannot fully describe the sonic performance of an amplifier. Only your own ears can finally judge our achievement. We urge you to listen and compare NAD to other products in its price range, and even higher. We don't think you'll find anything that comes close to offering the C 326BEE's overall musical satisfaction, well-rounded performance, and stellar value for money.

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> SPECIFICATIONS

PREAMPLIFIER SECTION

Line level input, Pre OUT

THD (2V in 2V out, CCIF IMD, DIM 100)	>0.004% (ref. 20Hz – 20kHz)
Signal/Noise ratio IHF	>100dB (A-weighted, ref. 500mV) >108dB (A-weighted, ref. 2V, Volume maximum) >92dB (A-weighted, ref. 100mV in 100mV out - unity gain)
Channel separation	1kHz >80dB 10kHz >70dB
Input impedance (R and C)	100kΩ+ 320pF
Maximum input signal	>8V rms (ref. 0.1 THD)
Output impedance	Pre out 75Ω Tape out Source Z + 1kHz
Input sensitivity	159mV (ref. 500mV out)
Frequency response	± 0.1dB (ref. 20Hz - 20kHz, Tone defeat ON) ± 0.5dB (ref. 20Hz - 20kHz, Tone defeat OFF)
Maximum voltage output	
IHF load	>10V (ref. 0.03% THD)
600 ohms load	>10V (ref. 0.03% THD)

Tone controls

Treble	± 5dB at 10kHz
Bass	± 8dB at 100Hz

POWER AMPLIFIER SECTION

Main IN, Speaker OUT

Continuous output power into 8Ω and 4Ω (Stereo)	>50W (ref. rated THD, 20Hz-20kHz, both channels driven)
Rated THD (CCIF IMD, DIM 100)	<0.009% (ref. 20Hz - 20kHz)
Clipping power	>65W (ref. 1kHz 1% THD)
IHF dynamic power	
8Ω	100W
4Ω	150W
2Ω	200W
Peak output current	>20A (ref. 1Ω, 1ms)
Signal/Noise ratio	>100dB (A-weighted, ref. 1W) >117dB (A-weighted, ref. 150W)
Damping factor	>100 (ref. 8Ω, 50Hz and 1kHz)
Frequency response	± 0.1dB (ref. 20Hz - 20kHz) 3Hz – 70kHz (ref. -3dB)
Input impedance	20kΩ + 1nF
Input sensitivity	630mV (ref. rated power)
Voltage gain	29dB
Headphone output impedance	68Ω

Channel separation	1kHz >80dB 10kHz >70dB
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Trigger Out

Output resistance	<100Ω
Output current	50mA
Output voltage	+12V

OVERALL SPECIFICATIONS

CD IN, Speaker OUT

THD (250mW to rated power, CCIF IMD, DIM 100)	<0.009% (ref. 20Hz - 20kHz)
Signal/Noise ratio	>94dB (A-weighted, ref. 1W) >110dB (A-weighted, ref. 50W, volume set for 2V input)
Frequency response	± 0.2dB (ref. 20Hz - 20kHz, Tone Defeat ON) 10Hz – 65kHz (ref. -3dB)
Channel separation	1kHz >80dB 10kHz >70dB

Power Consumption

Rated power	290W (ref. 230V AC 50 Hz; 120V AC 60Hz)
Standby power	<1W
Idle power	<35W

PHYSICAL SPECIFICATIONS

Dimensions (W x H x D)	Net	435 x 100 x 286mm 17 1/8" x 4" x 11 1/4"
	Gross*	435 x 116 x 332mm 17 1/8" x 12 1/2" x 13"
	Net weight	15.21 lbs (6.9 kg)
	Shipping weight	20 lbs (9.1 kg)

* Gross dimensions include volume knob / speaker terminals / connectors / feet. Note: Installers should allow a minimum clearance of 2- 4 inches for wire/cable management.

> REAR LINE DRAWING

