



# C 375BEE Integrated Amplifier

## > POSITIONING

The C 375BEE is far more than a bigger C 355BEE — in fact, it is much closer in spec to the M3 Integrated Amplifier from NAD's high end Masters Series. It also incorporates an updated version of NAD's "Building Block" concept to make the addition of the PP375 phono module and other affordable future upgrades possible. Attention to the most minute detail is evident everywhere, from the heavy gauge steel chassis to the sophisticated power supplies and copper buss bars channeling almost absurd amounts of current to the custom gold plated speaker binding posts.

The C 375BEE 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 simply must be heard, to be fully appreciated!



## > FEATURES



- 150W x 2 Continuous Power into 4 ohms and 8 ohms
- 250W, 410W, 600W 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
- Class A Voltage Stages (Preamp and Power Amp)
- Distortion Canceling Circuit
- BEE Anti-saturation Clamp
- Short signal path from input to output
- All sockets Gold plated
- Tone controls defeat switch
- Main-amp input & 2 pre-amp outputs
- Speaker A + B outputs and switching
- Soft Clipping™
- IR Input/Output
- 12V trigger out
- RS-232 serial port
- Detachable IEC Power Cable
- Optional PP375 MC/MM Phono Module
- <1W Standby Power Consumption
- Free of lead and other environmentally dangerous substances



## > DETAILS

### Features

The C 375BEE 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 375BEE has 7 line inputs (including 2 tape in/outputs with dubbing facility) and the pre-amplifier section can be separated from the power amplifier for easy upgrades or adding ancillary equipment. Thus the C 375BEE can be expanded to meet future system needs. The C 375BEE sports pre-amp outputs: 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). The first Preamp Out includes a level trim control to allow matching of amps or speakers with different sensitivities. Additionally there is a second Preamp Out to connect to powered subwoofer, an increasingly popular option. Another option is to 'bridge' the C 375BEE and add the matching C 275BEE (identical except without the preamp and source switching) for one of the most powerful home audio systems you'll ever encounter. Power goes from 150W x 2 to over 400W x 2!

For remote on/off switching of ancillary components in a system, such as power amplifiers or active speakers, the C 375BEE 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 375BEE 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 375BEE tone controls only work at frequency extremes leaving the critical mid-band essentially unaltered. The tone control circuits can be completely bypassed

using the tone defeat switch. The C 375BEE 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 375BEE 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 375BEE 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.

Getting high dynamic power from the power supply to your loudspeaker requires a fast wideband amplifier stage rugged enough to pass and control high peak currents without premature protection intervening. The safe operating limit for the C 375BEE has 4 times the capacity of the typical amplifier in this price range by using 4 pairs of 220W output transistors per channel.

The C 375BEE 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 criteria 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.

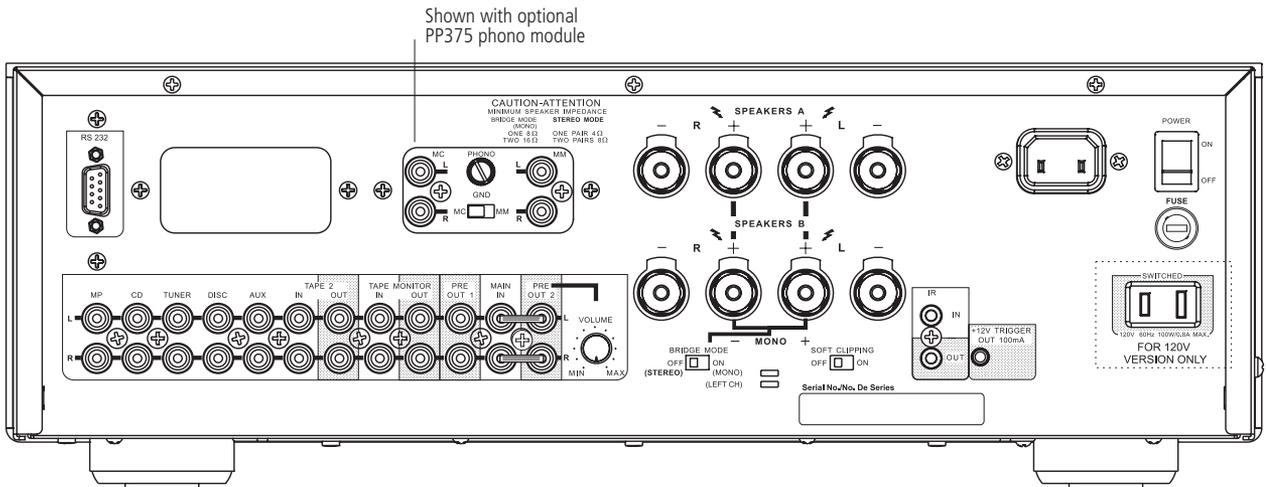
### Less Distortion = More Music

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 375BEE's overall musical satisfaction, well-rounded performance, and stellar value for money.

# C 375BEE Integrated Amplifier

## > REAR LINE DRAWING



# C 375BEE Integrated Amplifier

## > SPECIFICATIONS

### Pre-Amplifier Section

#### Line level input, Pre OUT

THD (2V in 2V out, CCIF IMD, DIM 100)	>0.004% (ref. 20Hz – 20kHz)
Signal/Noise ratio IHF	>102dB (A-weighted, ref. 500mV) >110dB (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
Variable out	<325Ω
Tape out	Source Z + 1kHz
Input sensitivity	158mV (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 ohm 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)	>150W (ref. rated THD, 20Hz-20kHz, both channels driven)
Continuous output power into 8Ω (Mono, Bridge mode)	>330W
Rated THD (CCIF IMD, DIM 100)	<0.009% (ref. 20Hz - 20kHz)
Clipping power	>170W (ref. 1kHz 1% THD)
IHF dynamic power	8Ω 250W 4Ω 410W 2Ω 600W
IHF dynamic power (Bridge mode)	8Ω 800W 4Ω 1200W
Peak output current	>50A (ref. 1Ω, 1ms)
Signal/noise ratio	>102dB (A-weighted, ref. 1W) >123dB (A-weighted, ref. 150W)

### Power Amplifier Section - continued

Damping factor	>200 (ref. 8Ω, 50Hz and 1kHz)
Frequency response	± 0.1dB (ref. 20Hz - 20kHz) 3Hz – 70kHz (ref. -3dB)
Input impedance	10kΩ + 200pF
Input sensitivity	1.2V (ref. rated power)
Voltage gain	29dB
Headphone output impedance	68Ω
Channel separation	1kHz >85dB 10kHz >75dB

### Trigger Out

Output resistance	<120Ω
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) >113dB (A-weighted, ref. 150W, 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	640W (ref. 230V AC 50Hz; 120V AC 60Hz)
Standby power	<1W
Idle power	<120W

### Dimension and Weight

Dimensions (W x H x D)	Net 435 x 133 x 352mm
	Gross* 435 x 150 x 396mm
	Net weight 15.3 kg
	Shipping weight 18.0 kg

\* Gross dimensions include feet, extended buttons and rear panel terminals.

Note: Installers should allow a minimum clearance of 55mm for wire/cable management.

