

Date of manufacture : Jan 85 - Jan 87

Please note that this document contains the text from the original product brochure, and some technical statements may now be out of date



- Power output conservatively rated at 55 watts per channel into 8 or 4 ohms.
- +3 dB IHF Dynamic Headroom for peaks: 110 W/ch at 8 ohms, 130 W/ch at 4 ohms.
- High-current output stage, able to deliver peak currents up to 40 amperes for precise control of voice coil motion with speaker impedances as low as 2 ohms.
- Bridging circuit yields 150 watts continuous power, 250 watts IHF dynamic power.
- Exclusive NAD impedance selector optimises power delivery to either high or low speaker impedance.
- Soft Clipping™ minimises distortion at output levels above the rated power.

NAD leads the audio industry in producing amplifiers with high-headroom circuitry and high-current output stages, precisely the qualities needed for musically accurate reproduction of today's wide-range analogue and digital recordings. The 2155 power amp is one of the finest in a long tradition of highly praised NAD amplifiers, with increased power, improved reliability, and numerous refinements in sound quality. As a high-current high-headroom power amplifier it drives even "difficult" loudspeakers to surprisingly high volume levels with clean, solid, full-bodied musical sound that remains refreshingly free from distortion even in transient peaks.

The 2155, which is simply the power amplifier section of the 3155 and 7155 packaged on a separate chassis, is NAD's "building-block" amp, offering a variety of convenient and economical approaches to up-grading a stereo system for higher performance and power. The 2155 is an obvious choice if you want to upgrade from a low-powered receiver or integrated amp, or if you are using a separate preamplifier. If you need still higher power, a pair of 2155s in the "bridged" mode deliver nearly three times as much power output for only twice the cost.

The 2155 delivers substantially more than its conservatively rated 55 watts/channel into the complex and varying impedances of real loudspeakers. In the bridged monophonic mode this amplifier is rated conservatively at 150 watts continuous output. And these amplifiers maintain a full 3 dB of IHF dynamic headroom (2.5 dB in bridged mode), meaning that they deliver twice their rated power in brief bursts: over 110 watts/channel in stereo and about 250 watts in bridged configuration. This headroom for peaks is crucially important for reproducing the uncompressed transients in modern digital and DBX-encoded recordings.

When combined as a bridged stereo pair, these amplifiers function as a 150 W/ch stereo amplifier with 250 watts per channel of short-term output. That power, together with the remarkable flexibility and flawless sonic performance of the 7155 or 3155's preamplifier section, make these combinations remarkable best-buy systems.

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## **High Current and Headroom: Designing for Real-Use Conditions**

Since amplifiers are usually rated in terms of a few standard specifications (e.g. 8-ohm power and THD), many designers concentrate on optimising test-bench performance. But in the real world, amplifiers are connected to loudspeakers with complex impedances, not to 8-ohm test resistors, and they are used to play music, not sine-wave test tones. In NAD amplifiers every circuit is designed to deliver full performance under real-use conditions. While many specific engineering goals follow from this principle, two have been the cornerstones of every amplifier in NAD history (including the legendary Model 3020): graceful handling of dynamic transients that exceed the amplifier's rated power, and the ability to deliver large bursts of output current to the loudspeakers. Electrical power is the product of voltage and current, but it is the current flowing through the voice coil that causes a loudspeaker cone to vibrate and reproduce sound. As NAD engineers have always known and other manufacturers have lately begun to realise, to obtain precise electromagnetic control of the speaker's motion the amplifier must be able to supply high peak currents upon demand, unconstricted by transistor "protection" circuits. The NAD 2155 amplifier circuit produces peak currents of up to 40 amperes per channel.

## **Loudspeaker impedance matching**

Standard lab tests of amplifiers use 8-ohm resistors in place of loudspeakers. But most loudspeakers have a lower and more complex impedance that increases the required amplifier output current. (And if you connect two pairs of loudspeakers, the effective impedance of the pair is halved.) For this reason the 2155 amplifier is designed to deliver its maximum power into low impedances of 4 or even 2 ohms. But the exclusive NAD impedance selector allows you to re-optimize the amplifier circuit to produce greater output voltage, for the most effective delivery of power to loudspeakers whose true impedance is 8 ohms or higher.

## **Soft Clipping**

NAD's trademarked Soft Clipping circuit gently limits the waveform when the amplifier is driven beyond its maximum power rating. By preventing the out-put transistors from being driven fully into saturation, the Soft Clipping reduces the harshness that is normally heard when an amplifier is over driven. Because of this and the amplifier's high dynamic headroom, the sound remains clean and musical even at very high sound levels, rather than becoming harsh as in other amplifiers.

## **Exceptional Performance and Value**

The NAD 2155 is a superb general-purpose power amplifier with an unusually attractive ratio of performance and power to price, and it is also the core of the unique NAD building-block concept that allows the stereo system to evolve with your needs or your budget, now and in the future.

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## POWER AMP SECTION

Continuous output power into 8Ω *		55W (17.4dBW)
Rated distortion (THD 20Hz - 20kHz)		0.03%
Clipping power (maximum continuous power per channel)		65W
IHF Dynamic headroom at 8Ω		+3dB
IHF dynamic power (maximum short term power per channel)	8Ω	100W
	4Ω	100W
	2Ω	130W
Damping factor (ref. 8Ω, 50Hz)		>50
Input impedance		22kΩ
Input sensitivity (for rated power into 8Ω)		1.3V
THD (20Hz - 20kHz)		<0.03%

## Bridged Mode

Continuous output power into 8Ω *		125W (21dBW)
IHF Dynamic headroom at 8Ω		+2.5dB
IHF dynamic power (maximum short term power per channel)	8Ω	250W

## PHYSICAL SPECIFICATIONS

Dimensions (W x H x D)	420 x 108 x 380mm
Net weight	7.8kg
Shipping weight	9.3kg
Power consumption (120 ~ 240V, 50/60Hz)	340W

\* Minimum power per channel, 20Hz - 20kHz, both channels driven with no more than rated distortion.

Dimensions are of unit's cabinet without attached feet; add up to 18mm for total height.

Dimension depth excludes terminals, sockets, controls and buttons.