

**C.E.C.**

**Balanced Headphone Amplifier  
with Speaker Output**

**HD53N**

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**Compatible with fully-balanced headphones  
with XLR plugs  
using advanced combination type headphone jacks**



The HD53N is a compact headphone amplifier with fully-balanced circuitry from input to output, featuring XLR output terminals compatible with high quality balanced headphones as well as two 6.3mm standard headphone output terminals with two different impedance and speaker output.



▲ A large 50W toroidal transformer in a compact body. Balanced left/right independent circuitries.



▲ Unbalanced RCA and balanced XLR input terminals on the rear panel. The RCA terminals are gold-plated for high grade sound. Large gold-plated speaker terminals with plastic protector covers, compatible with extra-thick speaker cables.

▼ Output transistors in 6 rows on each side of original LEF circuit. Heatsinks directly attached to the chassis for internal temperature control.

### Fully-Balanced Circuitry from Input to Output

The HD53N is a headphone amplifier with fully-balanced circuitry from input to output, offering balanced outputs for headphones as well as speakers. The HD53N offers clear, high-quality and low-distortion sound reproduction through two of CEC's proprietary technologies; a LEF (Load Effect Free) circuit with no feedback loop (essential to offset individual transistor characteristics, but tends to deteriorate sound quality), and IGM (Intelligent Gain Management) volume control that enables high density sound from low to high frequency range even at very low output levels.

### Compatible with a Wide Range of Headphones

Due to the wide variety of headphone types from low to high sensitivity and impedance (16Ω - 300Ω), a dedicated headphone amplifier needs to be highly adaptive. The HD53N combines two 6.3mm output terminals of differing impedance levels with two selectable output gain levels to accommodate a wide selection of headphones, taking maximum advantage of each headphones' characteristics and features.

The 6.3mm output terminals offer two levels of impedance; 10Ω for standard headphones and 120Ω for headphones optimized for use with high output-impedance amplifiers.

Furthermore, the HD53N offers a toggleable HIGH/LOW gain selector to cover for sound pressure level excesses/deficiencies that are beyond the range of volume control, allowing sound reproduction at optimal levels for each set of headphones. This gain selector is available for all of the HD53N's outputs; balanced headphone output, standard 6.3mm plug headphone output and speaker output.

### Miscellaneous Features

- The HD53N uses Neutrik's advanced high-grade XLR/6.3mm combination headphone jacks in order to support both balanced and standard headphones.

\*Use of balanced headphones is recommended for optimal performance.

- High grade speaker terminals and a large 50W toroidal transformer that

enables stable supply of power allow the HD53N to be used as an ordinary control-power amplifier.

- The HD53N features one unbalanced RCA and one balanced XLR input terminal, offering high-quality sound reproduction especially when combined with CEC's DA53N Multifunctional D/A Converter.
- Compact yet easy-to-read display of input/output modes and gain control options.

### Specifications

Frequency Response	10Hz - 200kHz, ±0.5dB (Balanced 50mW output power)
S/N Ratio	Headphone LOW/HI: 103dB (VOLUME 50% Max.Power/A-weighted)
	Headphone Balanced: 110dB (VOLUME 50% Max. Power/A-weighted)
	Speaker(8Ω): 103dB (Input 2Vrms / Output 10W)
THD	Headphone LOW/HI: 0.06% (Input 1Vrms / Output 0dBu)
	Headphone Balanced: 0.009% (Input 1Vrms / Output +3dBu)
	Speaker(8Ω): 0.03% (Input 2Vrms / Output 10W)
Rated Output Power	Headphone LOW: 1.15W x 2 (32Ω)
	Headphone HI: 0.25W x 2 (32Ω)
	Headphone Balanced: 4.7W x 2 (32Ω)
Speaker	Speaker: 13W x 2 (8 Ω), 18W x 2 (4Ω)
	Speaker: 13W x 2 (8 Ω), 18W x 2 (4Ω)
Load Impedance	Headphone: 16 Ω - 2k Ω / Speakers: 4 Ω - 8 Ω
Gain	High / Low (Selectable)
Input	Balanced x 1 (XLR, Hot=2), Unbalanced x 1 (RCA)
Headphone Output (Impedance)	Balanced x 1 (approx. 0Ω)(Hot=2, Cold=3)
	6.3mm x 2 (HI: approx.120 Ω, LOW: approx.10 Ω)
Speaker Output	Balanced x 1
Power Supply	120/230V 50/60Hz (Specified on rear panel)
Power Consumption	Stand by Mode: 14W
	Headphone: 23W, Speaker: 50W
Dimensions	Approx.218(W) x 354(D) x 58(H) mm (Incl. Legs, Knobs and Terminals)
Weight	Approx. 3.2kg
Accessories	AC power cord, Owner's manual
Color	Silver

\* Design and specifications are subject to change without notice.

Safety Precaution	Be sure to operate this product properly once you have thoroughly read the owner's manual.
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