

**C.E.C.**

Multifunctional D/A Converter

# DA53N

Compact multifunctional D/A converter with various digital inputs and a headphone output



Inheriting the compact size and multifunctionality of its bestselling predecessor the DA53, the DA53N (NEW) features significant improvements on its user interface; easy and user-friendly button operation, USB inputs on the front and back, and a clear LED display that indicates the status of various settings.



◀ DA53N interior with the red casings for the two LEF amplifier modules visible.



▲ Various input and output terminals. From left to right: RCA/XLR analog output terminals, FIXED / VARIABLE analog output selector button, digital input terminals; USB, TOSLINK, COAXIAL, AES/EBU, and power socket.

▼ Compact and clear display indicates input/output modes and various digital options.

## Multiple Digital Inputs and Various Digital Options

The DA53N supports four digital inputs for various user needs including USB for PCs, AES/EBU, COAXIAL and TOSLINK. Two different terminals are available for USB input; a USB B terminal on the back panel, and a USB mini B terminal on the front to accommodate use with mobile PCs, etc. It features Sample Rate Converter (SRC) and high-precision PLL circuit that provide effective jitter elimination resulting in high quality sound reproduction for common SPDIF signals (AES/EBU, COAXIAL and TOSLINK), as well as for USB packet signals, which are converted to SPDIF signals immediately following input.

The DA53N features two independent DACs (Burr Brown PCM1796 × 2) in a dual-mono configuration. The digital to analog converter uses the Delta-Sigma method, which offers a strong quantizing noise filtering effect. The oversampling rate of the Delta-Sigma demodulator can be toggled between HIGH(128fs/64fs/32fs)\* or LOW(32fs), allowing the user to select a preferred sound density.

\*The oversampling rate is automatically set by the system when "HIGH" is selected, according to the sampling frequencies of the input signals.

The DA53N offers two different digital filters; a standard "FLAT" filter, and a "PULSE" filter that offers natural sound reproduction.

## Miscellaneous Features

- The DA53N's analog section features an updated Current Injection (CI) circuit which omits the feedback loop that affects sound quality. The analog output has two modes; a "FIXED" mode for use with a variable volume control amplifier, and a "VARIABLE" mode for use with a power amplifier with no preamp function or active speakers.


- A 6.3mm standard headphone output allows use of the DA53N with just a digital-output playback device and headphones, without requiring an amplifier or speakers.

- The DA53N's clear and easy-to-read LED Display features indicators for input mode and various digital option settings.
- The DA53N's switching power supply contains an active AC-power-purifier circuit that reduces electromagnetic noises through the software control of voltage and current slew rate. Stable power is provided separately for the analogue and digital sections by independent voltage stabilizing circuits.

## Specifications

DAC	Burr-Brown PCM1796 × 2
Digital Input : Supported Sampling Frequency	USB(1.1) : 32-48kHz (Rear Type B) USB(1.1) : 32-48kHz (Front Mini B) AES/EBU(XLR) : 32-192kHz (1=GND, 2=HOT, 3=COLD) COAX(RCA) : 32-192kHz TOSLINK : 32-96kHz
Digital Filter	Flat, Pulse (selectable)
$\Delta \Sigma$ Oversampling	LOW=32fs, HIGH=128fs(input≤48kHz), 64fs(88.2≤input≤96kHz), 32fs (176kHz≤input)
Sample Rate Converter	24bit/96kHz ON/OFF(while SRC is "ON", $\Delta \Sigma$ OVS is fixed to "LOW"=32fs)
Frequency Response	20Hz-20kHz, -0.2dB(measured with "FLAT" digital filter)
S/N Ratio	XLR 125dB, RCA 102dB(OVS LOW=32fs)
Analog output (Fixed is ON)	Balanced(XLR/2=HOT) × 1 : 4Vrms Unbalanced(RCA) × 1 : 2Vrms
Analog Output (Variable is ON)	Balanced(XLR/2=HOT) × 1 : Max. 4Vrms Unbalanced(RCA) × 1 : Max. 2Vrms
Headphone Output (rated output power)	6.3mm × 1, 16 - 200 $\Omega$ Max.1.8Vrms × 2 (100 $\Omega$ ), 1.5Vrms × 2 (32 $\Omega$ )
AC Power Line	AC 100V - 240V, 50/60Hz
Power Consumption	16W
Dimensions	Approx. 218(W)x340(D)x58(H)mm (Incl. Legs, Knobs and Terminals)
Weight	Approx. 2.5kg
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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