

DIGITAL VOICING EQUALIZER DG-68



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Since launching the revolutionary DG-28 in 1997, the DG series, which combines sound field correction (VOICING) and sound field creation (EQUALIZING) functions, has been pursuing the ease of use and high electrical performance.

DG-68 is a successor of DG-58, released in 2013, adopting the latest devices and further improving AD-DA conversion accuracy. In VOICING mode, the DG-68 measures room acoustics accurately and eliminates extreme dips and peaks such as standing waves. This improves the localization of vocals and the expansion of sound stage dramatically. In addition to automatic adjustment of target characteristics, it is also possible to draw desired target curve in the manual mode or to correct room acoustics according to the customer's own loud speakers.

By performing VOICING and EQUALIZING, it is possible to achieve the ultimate ideal sound.

User Interface

- Simplified User Interfaces and Easy to use



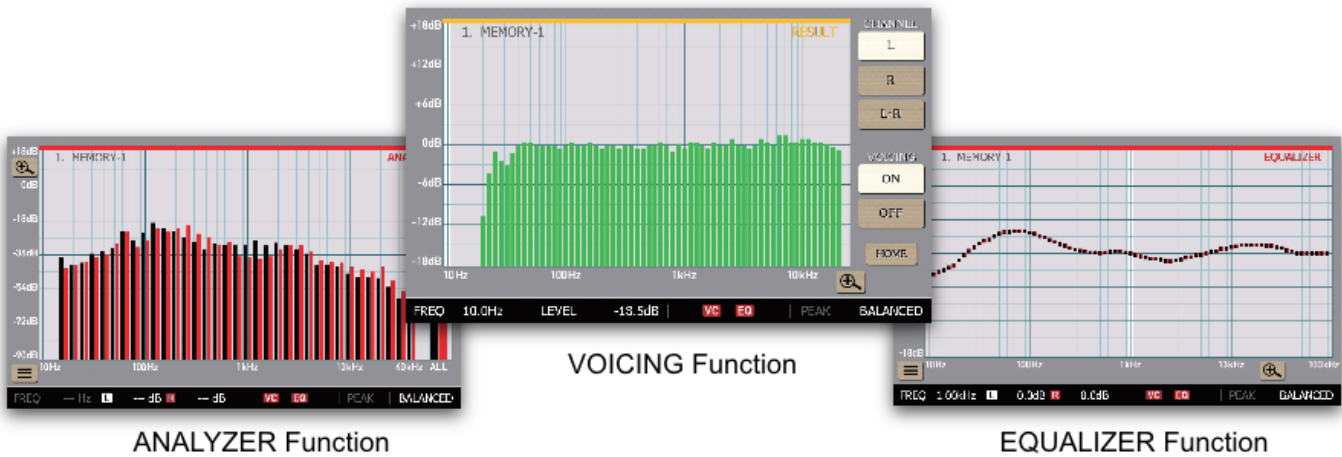
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DG-68 obtains the intuitive and highly readable menu screen which allows audiophiles to have stress-free access to all functions.

The Big Three Functions

- Simple access from Main Menu
- Pursuing Easy to Use



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The DG-68 incorporates 3 complementary functions and the desired function can be selected easily on the HOME screen.

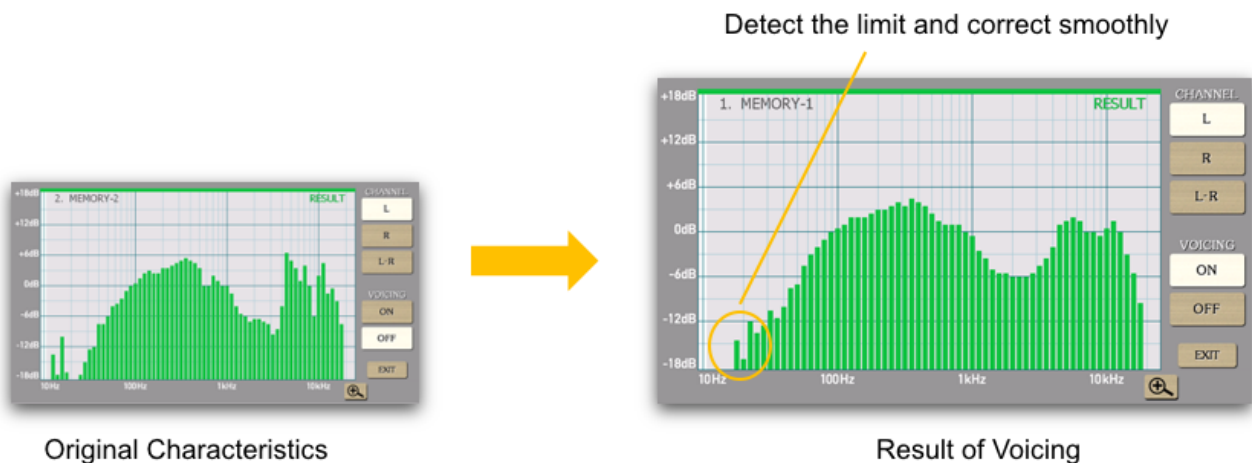
The Voicing function involves measuring the acoustic characteristics of the room and provides the compensation to achieve ideal reproductive conditions automatically or manually.

The Equalizer allows adjusting the tonal result by boosting or attenuating the level of signal in specific frequency bands. Any desired frequency response can be created.

The Spectrum analyzer makes it possible to display the actual frequency components of the music being played by the real-time analysis.

Evolved Voicing Engine

- Improve measurement accuracy



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Accuphase further evolves the automatic sound field compensation.

Smooth voicing keeps frequency response differences between left and right channel to minimum, and creates a very smooth response curve. This helps to eliminate the standing wave and emphasize the sound localization of the music source.

The smooth voicing feature prevents excessive correction based on the speaker's low frequency reproduction capability, further improves measurement accuracy and enhances the effectiveness of sound field compensation.

As a result, the DG-68 realizes the excellent bass reproduction.

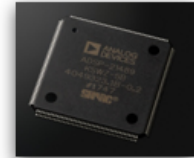
Electrical Features

A/D Converter
4 parallel A/D Converter
ANCC Equipped

D/A Converter
8MDS+D/A Converter
ANCC Equipped



Digital Signal Processor
40bit Floating point native
processing up to 384kHz



Analog devices DSP
ADSP-21489

Internal View

*ANCC: Accuphase Noise and Distortion Cancelling Circuit

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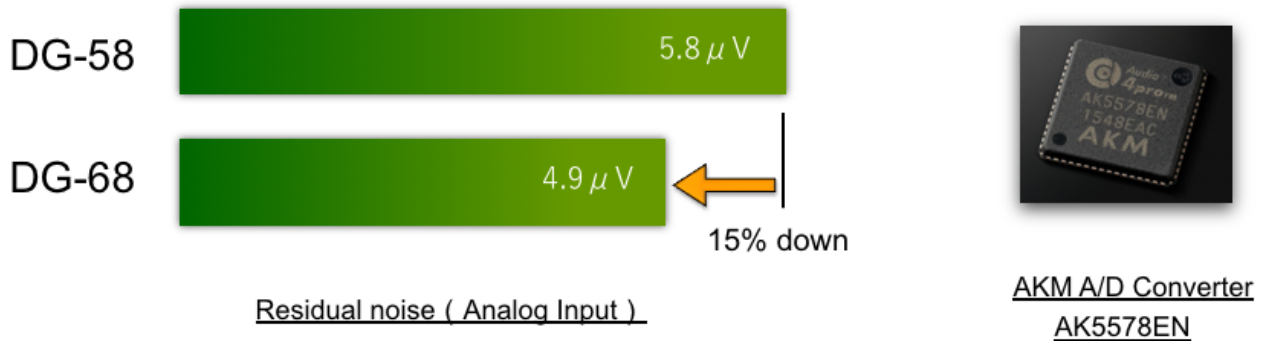
DG-68 has the digital signal processing modules on the right side, and the mixed-signal processors including A/D, D/A converter on the left.

The DSP chip from Analog Devices realizes high-speed filtering process without the down-sampling up to 384kHz signals.

The latest A/D, D/A converter chips show the optimum performance that outputs the signal through super-accurate fully digital signal processing.

Involved Performance (A/D Converter)

- 4 A/D converters are driven in parallel
- ANCC installed to achieve extreme performance



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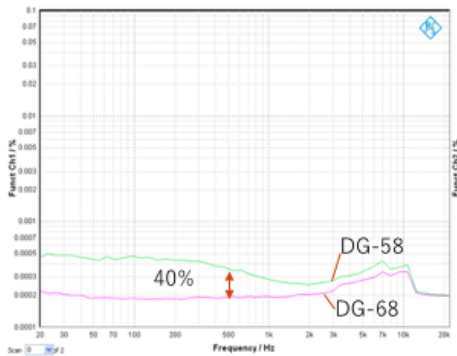
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A/D converter circuit which converts the analog input signal from pre-amp to digital is one of the most important module.

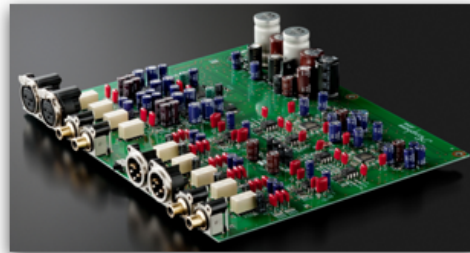
In the DG-68, the premium 32-bit AK5578EN from AKM used in 4 parallel configuration. The residual noise at analog input is 15% improved.

Involved Performance (D/A Converter)

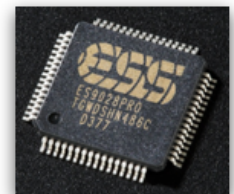
- 8 D/A converters are driven in parallel with MDS+ technology
- ANCC installed on post filter circuit



THD+N (Analog 2.5V Output)



A/D, D/A Ass'y



ESS Technology
ES9028PRO

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The D/A converter which is the exit of music signal is also required the high-performance.

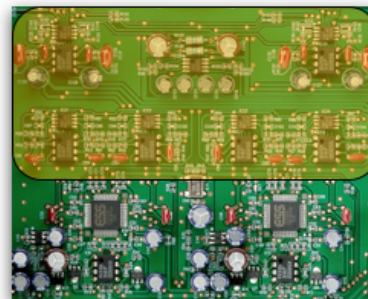
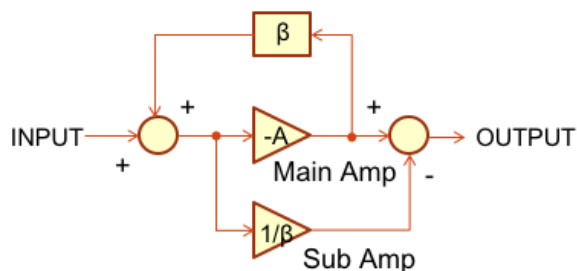
Not only 32-bit Hyper stream II DAC from ESS used in 8 parallel configuration, but also Accuphase-unique ANCC technology is installed.

THD+N, which is the important performance index of D/A converter has achieved the significant improvement over 40%.

ANCC

(Accuphase Noise and distortion Cancelling Circuit)

- Noise and distortion cancelling architecture by using feedback + feedforward method
 - Distortion can be minimal, noise from main-amp and sub-amp is swapped



ANCC Circuit

DG-68 D/A Converter Circuit

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ANCC is the latest Accuphase's unique technology. To reduce noise from DACs, filter amp needs wide dynamic range and linearity.

High voltage power supply and complicated architecture are required to obtain expected performance. ANCC needs only general main amplifier and small low noise OP-AMP as the sub-amplifier.

Feedback loop cancels the distortion of main amp, and feedforward loop negates the detected distortion, and this also shows the same effects on noise.

This new technology contributes to make accurate D/A conversion with a simple circuit.

Signal Input / Output

- Analog Input / Output : LINE, BALANCED
- Digital Input / Output : HS-LINK (Ver.2) , Coaxial, Optical
- USB Interface for Snapshot and Data Import / Export



Rear Panel

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The DG-68 is equipped with balance and line analog inputs / outputs as well as with digital inputs / outputs including HS-LINK (corresponding to Ver.2), Coaxial and Optical, it provides all kinds of connections.

With a USB flash drive, the unit provides 30 memory slots for saving Voicing and Equalizer results and settings.

HS-LINK Version2 Available

- HS-LINK is upgraded to Ver.2
 - Transmits master clock separately
 - Supports up to 384kHz / 32bit - PCM, 5.8224MHz - DSD
 - Use the same HS-LINK cable as Ver.1
- HS-LINK Ver.1 output is still available.
 - Backward compatibility.



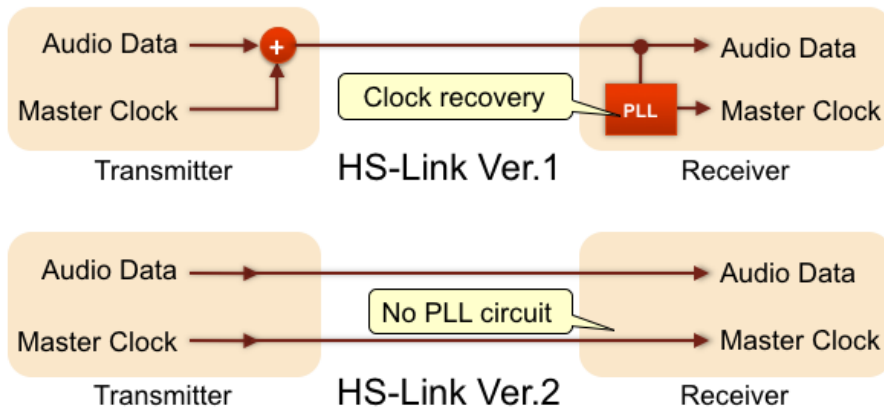
HS-LINK Cable

HS-LINK Version 2 extends the HS-LINK standard.

For backward compatibility, DG-68 is still available HS-LINK Ver.1 output.

HS-Link Version2 Advantages

- Transmitting the master clock separately
 - No Jitters occurred from Clock Recovery circuit



The biggest feature of HS-LINK Ver.2 is sending music signal and master clock separately to D/A converter in a receiver.

HS-LINK Ver.1 transfers the music signal merging the master clock together, PLL circuit for master clock recovery is needed at receiver side.

Since master clock is being transmitted as it is, in HS-LINK Ver.2, not only master clock recovery is unnecessary at receiver side but also it comes to be free from the jitter at PLL circuit.

Further More...

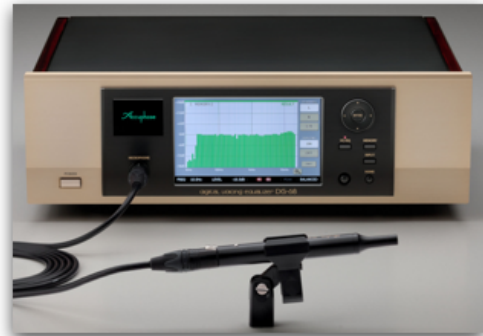
- Hair-line Finished Aluminum Top Plate
- Microphone for measurement, Remote Commander include



Top Plate



Remote Commander



Microphone

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Thick aluminum top plate with exquisite hairline finish and side panel with natural wood grain finish are reflected in elegance and sophistication.

The dedicated remote commander and sound field measurement microphone are included.