



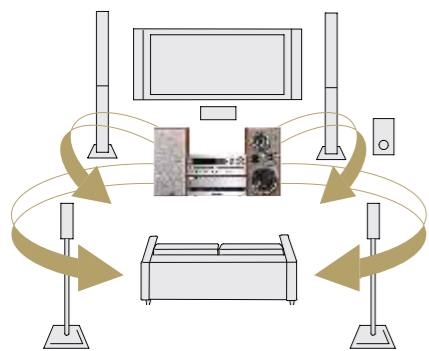
New concept DVD Entertainment system with Virtual Front Surround

Home Cinema has become so popular nowadays that an enormous variety of brands and models are available in various product categories. However, in order to experience a spectacular and real sensation in surround sound, there is a need for multiple loudspeakers that need to be located and set-up carefully. The position of the TV monitor must also match the listening area, so as a result the optimal listening position is limited to a very restricted area. The strict setup requirements, the number of loudspeakers, and their size, the many wires, the complicated set-up and required adjustment means many users are not satisfied with their current Home Cinema system.

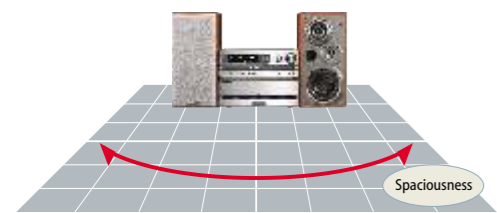
To counter these limitations, and with 60 years of experience in the world of electronics as an expert in the physics of audio and video, Kenwood has developed the new DVD entertainment system, AX-7. Using the third generation of Kenwood's original development "Virtual Front Surround" (VFSIII) and the power of the digital signal processor from Analog Devices Incorporated (ADI), Kenwood has constructed a unique algorithm for its new front surround system. The AX-7 is able to recreate the atmosphere of surround sound for Home Cinema with only 2 loudspeaker enclosures that incorporate a double speaker system (a 2-way 2 speaker hi-fi system and a single full range effect speaker).

Virtual Front Surround III makes it possible to experience a flexible and spectacular surround sound without the complicated critical set up of many speakers and without speaker cables cluttering your room

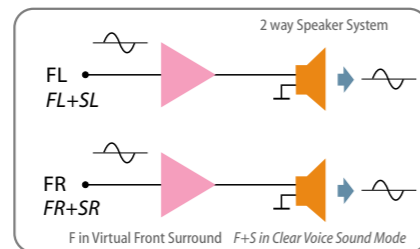
The **Virtual Front Surround** system enables an expanded acoustic field and offers a spectacular surround sound with only 2 front speakers.



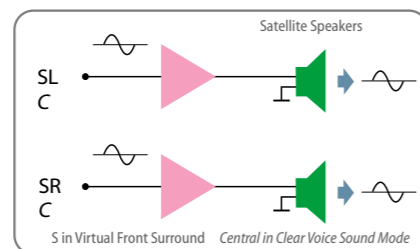
Surround effect produced by new Virtual Front Surround III, generated by a double speaker system incorporated in each front speaker enclosure.



Adjustment of the surround effect (narrow or wide)



Amplification Circuit in Direct Linear configuration. In the upper diagram both amplifiers are used for the amplification of the left and right front channels using *Virtual Front Surround*, or combined with the front channel if *Clear Voice Sound* has been selected. In the lower diagram both amplifiers are used for left and right Surround channels where VFS is selected, or for center channel where *Clear Voice Sound* is selected.



Characteristics & Specifications

C-AX7 DVD Control Pre-Amplifier

Pre-Amplifier Section

- Full Digital controlled Pre-Amplifier
- Wolfson CODEC
- Virtual Front Surround III
- ClearVoice Sound
- Dolby Digital / DTS / PLII Decoders
- 4 Analog inputs (Line 1~2, TV, AUX) - RCA pin
- Digital DAP input - by Stereo mini jack
- 1 Analog Audio output (Line 1)
- 6 channel Pre-out [(Front L/R, Surround L/R, Central, Sub-woofer)]
- 1 Digital Audio Output (Optical output: BitStream/PCM)
- Video Output (Composite, S-Video)
- SCART Euroconnector adaptor (Composite + L/R RCA → SCART plug)

DVD/CD Section

- Front Loading
- DVD-Video / VCD / CD-DA / MP3 / WMA / JPEG / PHOTO CD Playback
- video DAC of 10bit 54MHz
- AUDIO DAC of 24bit 96/48 kHz
- DVD-R/RW (DVD+R/RW)
- CD-R/RW Playback
- Repeat (ONE, ALL, PGM, A-B), RANDOM
- PGM Play

Tuner Section

- FM: 87.5MHz - 108.0MHz
- AM: 531 - 1602kHz
- RDS

Timer

- SLEEP
- A.P.S.
- PROG. 1/2 (weekly timer)

Remote control unit

- 63 key

Dimension

- W 270 × H 101 × D 347 mm

Weight

- 5.0kg

M-AX7 Power Amplifier

Power Amplifier Section

- BTL two channel configuration : 50W + 50W
- 4 channel multi-drive: 25W x 4
- Discrete Power Amplifier topology
- 2 Analog Audio Input (Front - Surround)

Dimension

- W 270 × H 101 × D 347 (mm)

Weight

- 5.0kg

LS-AXD7 Speaker system

Speaker Section

- 2way 2 speaker + 1way full range
- 2 way: Woofer 13cm acoustic suspension, Tweeter: 2.5cm balanced soft dome
- 1 way: Full range 5cm cone suspension
- Detachable grill

Dimension

- W 164 × H 330 × D 211 mm

Weight

- 3.9kg

Accessories



HD20GA7

Digital Audio Player with graphic display screen and *Clear Digital Amplifier*



SW-508B

Active Subwoofer

- 160mm double woofer with independent amplification
- Dynamic Power: 75W+75 Watt @ 6 Ohm
- Bass Reflex System
- Adjusting frontal controls
- Frequency response: 60Hz to 200Hz

Listen to the Future

Kenwood has always connected with people through sound. Now we want to expand the world of sound in ways that only Kenwood can, listening to our customers and to the pulse of the coming age as we head toward a future of shared discovery, inspiration and enjoyment.

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KENWOOD

Listen to the Future



AX-7

DVD/CD Entertainment System

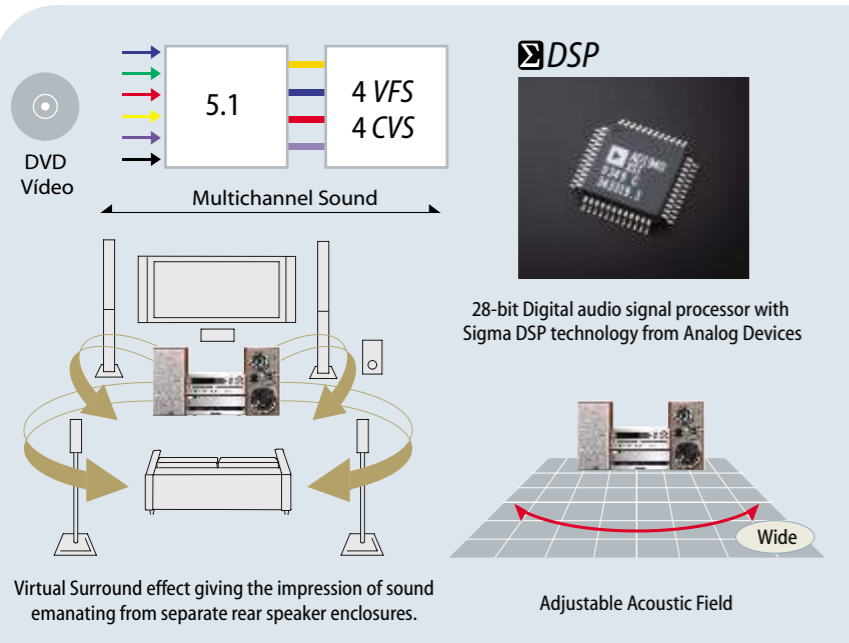


with *Clear Voice Sound*



Virtual Front Surround

A Surround System based on an original Kenwood algorithm (**VFS III**) written for the ADI (Analog Devices Incorporated) processor, which offers the experience and sensation of spectacular surround sound with only two front speakers using a 2-way speaker system and also incorporating an independent satellite speaker.



Front Loudspeakers

Exclusive 2-way loudspeakers that incorporate a third full range satellite loudspeaker in the upper part. The frequency range of the satellite loudspeaker and its direction towards the listener has been calculated to reproduce clear sound effects, music or clear dialogue depending on the selection *Clear Voice Sound*, *Movie* or *Music* mode. If *Virtual Front Surround* has been selected, the upper satellite loudspeakers reproduce the surround channels to create a natural and realistic surround sound with impressive impact.



Satellite speaker used for the Center or Surround channel reproduction depending on VFS or Clear Voice Sound setting.

Acoustic Impression (Wide Control) adjustment.

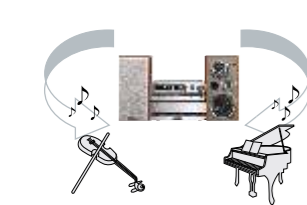
Allows the listener to 'virtually' match the dimensions of the listening room by expanding or reducing the sound field.

Clear Voice Sound

The center channel is one of the most important channels in good multi-channel reproduction. Processed sound tracks with 5.1 or more channels dedicate a special frequency range to the center channel to make dialogue and voice sound emanate from the center of the screen in a stable and detailed way. With the "Clear Voice Sound" technology for clear and natural sound, the voices are well reproduced, detailed and clear.

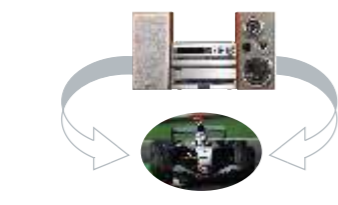


When *Clear Voice Sound* mode has been selected, the Center speaker information is assigned to the full-range satellite speaker, located in the upper part of the loudspeaker enclosure. In that case the combined Front and Surround signals are assigned to the 2-way speaker section.



Music Mode

The Music Mode adapts the acoustic field to reproduce music with great realism, atmosphere and natural sound. This feature is applicable for *Virtual Front Surround* as well as *Clear Voice Sound*.

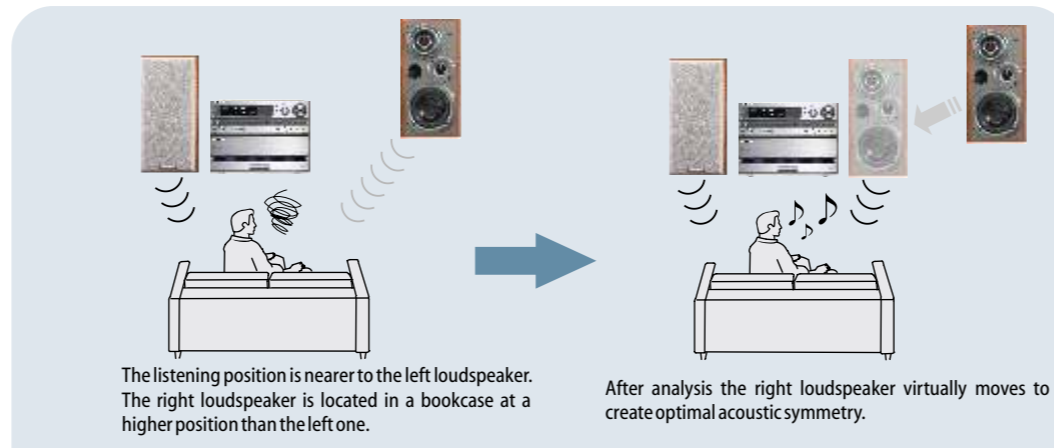


Movie Mode

The Movie Mode adapts the acoustic field to a dynamic surround sound during movie reproduction offering sensational and realistic surround effects. This feature is applicable for *Virtual Front Surround* as well as *Clear Voice Sound*.



Auto Room EQ (Full Automatic Equalization to adapt to the listening environment)

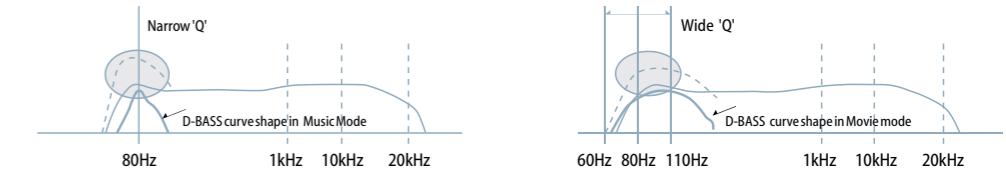
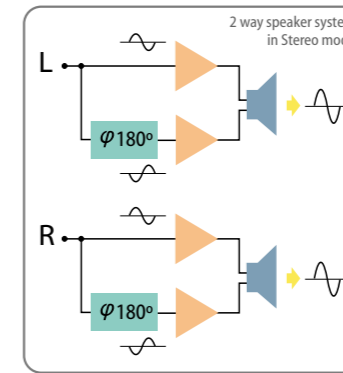


A Calibration Microphone is provided with the system to analyze frequency response, sound pressure and time alignment, using the Auto-Room-EQ functions via the Sigma DSP processor.

The 'Auto Room EQ' feature executes an automatic equalization for the optimal balance of sound level, timbre and phase at the listening position. After locating the microphone at the listening position, the processor analyzes the time that the signal takes from each loudspeaker to the microphone. The delay time between both loudspeakers serves to compensate and to adjust the sound image. The compensation is carried out to obtain optimal frequency characteristics in the listening area. The equalization process compensates for the losses in timbre due to absorption of produced overtones and cancellation of reflections caused by curtains or other elements of absorption in the room. It also analyzes the reflections and bounces of the signal due to reflecting walls, windows or other surfaces. Through analysis of white noise transferred from the loudspeakers to the microphone, the Sigma DSP processor defines the suitable equalization curve to achieve optimal sound quality at the listening position.



amplifies them and passes the signals to each dedicated speaker unit. For stereo sound, the signals are sent to the 2-way speaker part of the front loudspeakers. In stereo mode, the full range satellite loudspeakers are not in use. In the AX-7 Kenwood uses a fully discrete amplifier section for clear and powerful sonic performance.



High Fidelity Speakers

In addition to the full range surround speaker located in the upper part of the Loudspeaker, used for dialogue and effects, the speaker system incorporates a 2-way speaker system with a 12 cm cone type woofer and a 2.5 cm balanced dome tweeter. The speakers are magnetically shielded to make setting next to the TV possible. Thanks to the powerful amplifier, the unique sound features, and the high quality construction and sound of the loudspeakers, the AX-7 turns out to be a winner in the market.



Connectivity and Control

It is possible to listen to the Kenwood HD20GA7 portable hard disc player via the AX-7 and operate it with the system remote control if connected by a special cable (PNC-150) with 3.5mm plug.



HD20GA7 (optional)
Portable hard disc player with *Clear Digital Amplifier* and a 20Gb hard disc connected to the AX-7 audio/video system by PNC-150 cable.

M-AX7 4-channel Power Amplifier

The M-AX7 is the special power stage of the AX-7 incorporating 4 independent power broadband high fidelity amplifiers. The amplifiers produce 25 Watts each and can be bridged to two stereo channels of 50 Watt each.

The pre-amplifier C-AX7 sends the corresponding signals of Virtual Front Surround or Clear Voice Sound to the M-AX7 which

Power amplifier circuit based on the BTL (Bridge-Tied Load) principle. In the diagram the amplifiers are indicated as 4 triangles used in high power stereo listening. Each channel uses a pair of bridged amplifiers in contra phase to duplicate the power.

D-BASS III System

The D-BASS III system accentuates the low frequency band in an effective and suitable way according to the listening mode. The "Q" (relation between the gain and the bandwidth) adapts in an optimal way to music or film reproduction. The result is a warm sound with tight bass in music mode where the bass is powerful and with impact where needed during movie reproduction.