



Taking Surround to New Heights

- Introduces a new dimension in surround sound listening
- Contains all the proven quality of Dolby® Pro Logic® IIx
- Provides a compelling new listening experience with a more lifelike soundstage
- Enables greater flexibility in expanding a 5.1 playback system to 7.1, or a 7.1 system to 9.1
- Signifies an appealing new approach to surround playback in the home

Dolby Pro Logic IIz introduces a new dimension to home theater listening through the addition of front height channels, creating a 7.1 or 9.1 playback system that enhances the spaciousness of music, movies, and video games.

Through the addition of a pair of speakers above the front left and right speakers, Dolby Pro Logic IIz introduces a vertical component to the horizontal soundfield of a conventional 5.1 or 7.1 surround sound system. The enhanced spatial effects bring an overall airiness to the listening experience, a new dimension of presence and depth.

With Dolby Pro Logic IIz, rain in a movie now seems to be actually falling on the listener's roof, concert videos bring a more intense sense of being at the performance, and orchestral works deliver more palpable depth, power, and connection.

In games, the added dimension increases the realism and immerses players more deeply than ever in the action.



Because it processes only non-directional sounds for the height channels, Dolby Pro Logic IIz maintains the integrity of the source mix and the effects are always appropriate to the material. The added dimension complements the sound from the rear surround speakers, adding spaciousness while honoring the original intent of the content creator.

The Challenge

7.1-channel surround sound has made the home theater experience exceptionally involving and compelling. However, due to room layouts and space limitations, not every setup can accommodate the back speakers of a 7.1 system. Through our extensive research into multichannel listening, we have developed technology that delivers alternative solutions.

Dolby Pro Logic IIz solves these problems by adding front height channels, through a pair of speakers mounted above the left and right speakers in a home theater surround sound system. Dolby Pro Logic IIz:

- Improves on the spatial presentation of current 7.1 surround sound setups
- Provides installation flexibility for setups in which rear surround speakers are not practical

Dolby Pro Logic IIz offers a new dimension in sound, bringing a greater sense of air and presence from any content. Benefits include:

- Realistic and involving surround sound from any music or movie source
- Dramatic alternative listening perspective for installations that can't accommodate back surround speakers
- Functions with original stereo or multichannel sources
- Requires no special encoding or separate mixing by the content producer
- Simplistic speaker positioning and wiring

The added channels also add flexibility for designing a surround sound system with up to 9.1 channels. 9.1-channel AVRs offer even more options, including state-of-the-art 9.1 playback with surround and back speakers and two front height speakers.



Because Dolby Pro Logic IIz is based on proven Dolby Pro Logic IIx technology, it is as easily implemented in AVRs. The height channels become another option on the speaker setup menu. Additionally, game developers now have a powerful tool that opens up the potential for true three-dimensional audio effects. With Dolby Pro Logic IIz, developers can encode specific height information in the z-axis. Players will experience even greater immersion and realism.

Why Height

Extensive listening sessions established that adding a height dimension to a home theater brings a greater sense of realism than would the addition of surround speakers in the horizontal plane to 7.1 systems. People are also far more sensitive to directional cues from sounds occurring in front than from those behind, determining that front speaker placement is ideal.

Expanding on established Dolby Pro Logic II matrix decoding innovations, Dolby Pro Logic IIz identifies and decodes spatial cues that occur naturally in all content—stereo and 5.1 broadcast, music CDs, DVDs, 5.1 and 7.1 Blu-ray™ discs, and video games. Dolby Pro Logic IIz processes low-level, uncorrelated information—such as ambience and some amorphous effects like rain or wind—and directs it to the front height speakers.

Just as with the surround channels in existing Pro Logic IIx technology, the height extensions do not offer any new kinds of program content to drive the height channel outputs. The extensions are designed to more effectively use existing program material when height channel speaker outputs are present. The height extensions can be used to up-mix a variety of sources from movies and music, but are particularly well-suited to up-mix game content.

Dolby Pro Logic IIz Benefits

- Realistic and involving surround sound from any music, movie, or video game source
- Dramatic alternative listening perspective for installations that can't accommodate back surround speakers
- Functions with original stereo or multichannel sources
- Allows for simplified speaker positioning and wiring

Unlike other solutions, Dolby Pro Logic IIz does not employ digital signal processing (DSP) to artificially model a room environment or create ambient sound effects. Instead, Dolby Pro Logic IIz identifies non-directional, de-correlated signals naturally present in the mix (such as some audio elements in wind noise, musical scores, and other ambient sounds) and extracts them for presentation in the height channels.



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