

AVM 40 and AVM 50 Audio/Video Processors with ...

ANTHEM® ROOM CORRECTION (ARC™) SYSTEM

ANTHEM®

Touted as the most important breakthrough in home audio in decades, Anthem Room Correction (ARC), first available in our top-of-the-line D2 a/v processor, is now available in other products and price ranges across the Anthem lineup. More than any other "Room EQ" system on the market, our proprietary ARC technology accurately and effectively corrects the effects of a room's boundaries and reflective surfaces on sound quality. Don't even consider buying an audio/video processor without it!



"ARC is like nothing else I have experienced in terms of altering, for the better, a system's sound."

— Brian Florian, *Secrets of Home Theater and High Fidelity*

While equalizing frequency response in a room to achieve some generic (i.e. "flat") response is a common approach to solving the problem, it will result in an unnatural spectral balance, since it doesn't take into account human hearing. Anthem's approach is a true audiophile solution: the ultra-high-resolution Anthem Room Correction (ARC™) system actually adjusts for the room's effects on each speaker in a way that mimics our hearing to achieve the optimal in-room sound. ARC™ differs from other systems in that it uses proprietary processing to compute each speaker's in-room frequency response and then computes a target frequency response for each to yield the optimal in-room sound.

What makes the ARC™ system better ...

ARC™ is unlike anything ever available. ARC™ is a state-of-the-art room correction system that analyzes each speaker in the room independently, then sets output levels, crossover frequencies and room correction parameters for each speaker. The system includes Anthem® software with files for the individually calibrated microphone and specific Anthem® A/V processor.

ARC™ applies Correction for up to 7 Channels plus Subwoofer, operating on all analog and digital sources at 44.1 kHz, 48 kHz, 88.2 kHz and 96 kHz without reducing the bit rate.

ARC™ applies Super-Efficient Infinite Impulse Response (IIR) Filters in addition to **Anthem's Custom Filter Topology** to minimize delay and reduce processing gain noise. The combination of limiting the widths of our IIR filters and applying our topology means that any artifacts that might have resulted from the filtering process are so small as to be inaudible.

ARC™ allows for Multiple Microphone Measurements. Most "Room EQ" methods work from a single point source, taking one measurement at the primary listening position. ARC™ provides for *multiple user-selected* measurement points (we suggest a minimum of five), beginning with a measurement at the primary listening position and then moving across the listening area. This process is critical in properly dealing with standing waves and ensures optimal sound throughout the listening area.

Multiple Measurements and Ultra-High Resolution require Enormous Processing Power. The AVM processor's Digital Signal Processing design uses twin DSP engines (each rated at 150 million instructions per second!)—enough power to handle the ARC™ system's rigorous processing demands.

Unlike many "Room EQ" systems, ARC™ applies Correction to Peaks (modes) and Dips (anti-modes). Tackling both allows us to achieve a far more accurate and natural room response. And to limit the demands on the amplifier, as well as maximize noise, ARC™ applies appropriate limits to this correction.

ARC™ is Ultra-Accurate! The connected PC's 64-bit floating-point processor does the hard work of calculating the correction curves, which greatly minimizes rounding errors of a less sophisticated "calculator".

ARC™ provides the ability to set Separate Music and Movie Configurations. This allows for choosing different speaker configurations, setting different crossover points, and allowing separate measurements and correction curves to optimize both music and movie listening experiences.

ARC™ allows a Simple, Fully-Automated Procedure as well as a Manual Mode with Advanced User functions, allowing the user to manually set:

- Crossover frequencies;
- Level of room gain;
- Maximum "Room EQ" frequency.

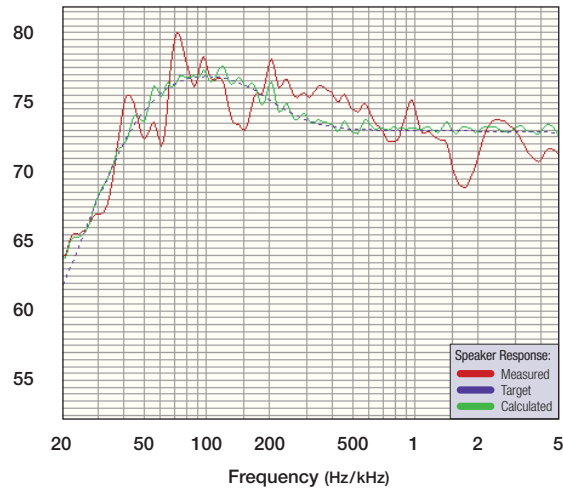
ARC™ and the "Surround Experience." Surround and rear speakers are often at a great disadvantage in the quest for good sound due to the variety of less-than-ideal placement options typically available. Not any more! ARC ensures surround/rear speakers match perfectly with the main speakers for a seamless surround experience.

COMING SOON! ARC-1 Anthem® Room Correction System as an add-on for existing AVM 40's and AVM 50's. Contact your Anthem® Dealer for more details.

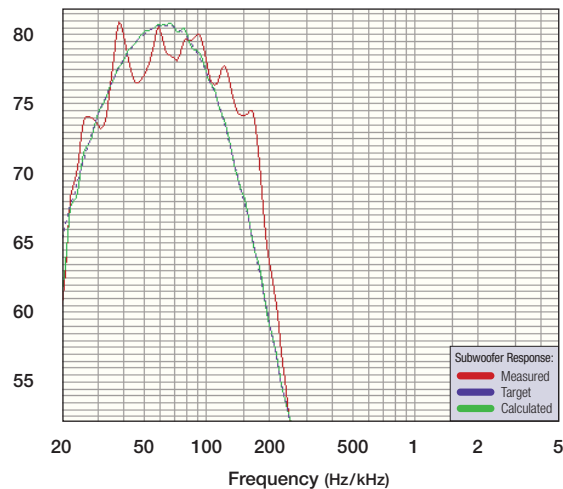
For more information on award-winning Anthem® technology, visit our website at www.anthemAV.com

ARC™ in action ...

Left Front Speaker – ARC™ measures, calculates and corrects for sound anomalies caused by room boundaries and reflective surfaces.



Subwoofer – ARC™ measures, calculates and corrects for the room's standing waves.

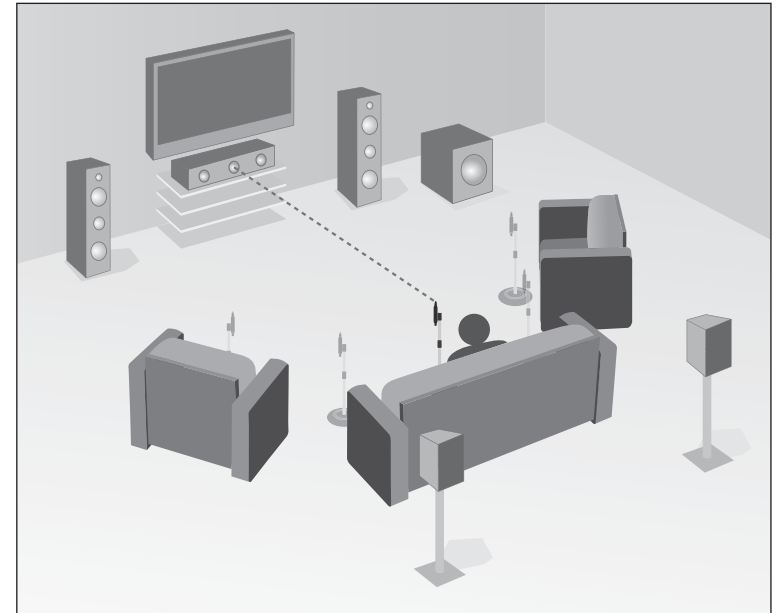


“Taking measurements is the easy part. Knowing what to do with those measurements (and having the processing power to do it!) is what sets the ARC™ system apart from other ‘Room EQ’ systems.”

– Anthem® Design Team

How does ARC™ work?

The process starts when a test signal is sent from the Anthem® processor to each connected speaker and the signal is picked up by the individually calibrated microphone. The system puts each speaker through a full frequency sweep to highlight problem areas and determine the necessary adjustments. Configurations are saved on a connected PC, allowing the user to optimize the system for multiple configurations for music and movies. The optimized solutions are then uploaded to the processor and all levels, crossovers and room corrections are put in place. ARC™ can then be turned on and off by source as well. Truly an audiophile solution to the problem of “the room”!



ARC™ microphone is positioned at seated ear level, pointed at the ceiling.

Look who's talking about ARC™ ...

“... Room Correction makes the best A/V processor available even better.”

– Daniel Kumin, *Sound & Vision*

“I was totally amazed by how much of an improvement the ARC made ... the difference was huge.”

– Ken Taraszka, *AudioVideo Revolution*

“No exaggeration ... the ARC demo may have been THE BEST multi-channel demo I've ever heard at a trade show.”

– *Residential Systems Magazine*

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