Subject: Re: Inspired by the McIntosh XRT2K
Posted by justinc on Thu, 25 Jan 2007 21:47:24 GMT
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Im really not sure about technical details I just plug the values into bassbox and modeled it and thats what I got  My understanding though is since the drivers will be spaced about 1" apart the wave pattern in a line array is summative up to about 14,000hz where it will then start to decline. Here's the info I found about how bassbox calculates values.  When multiple drivers are used, the sound waves emanating from them will combine to create a composite sound wave that is louder. BassBox Pro assumes that the drivers are all the same kind and, in most cases, that they are driven with identical signals so that their sound waves will usually sum coherently. This means that the net sound level will increase 6 dB with every doubling of drivers.However, there may be occasions when the sound waves do not add coherently and the “Drivers do NOT add coherently” option should be turned on. In these cases the net sound level will increase only 3 dB for every doubling of drivers. The following list describes situations when coherent additions will not happen. Turn on the “Drivers do NOT add coherently” option for these situations:• The drivers will not sum coherently if they are wired separately and are driven with different signals. For example, two woofers are mounted in a  common cabinet but one is driven from a left stereo signal and the other is driven from a right stereo channel.• The drivers will not sum coherently if they are mounted too far apart. Their center-to-center spacing should be no greater than one quarter (¼) wavelength for the frequencies in their passband. This is usually not a problem for subwoofers because they are driven only with low-frequencies having long wavelengths. For example, many subwoofers use a crossover frequency of 100 Hz or less—the wavelength of 100 Hz is 136 inches (345 cm). As long as the drivers reproduce frequencies that are not higher than 100 Hz then the drivers in the subwoofer can be mounted as far as 34 inches (86 cm) apart because this is one quarter of 136 inches.