

MPT Line Array Series  
MPT12.0  
MPT6.5



February 1, 2012



Pure three way design

Two sizes with matched alignment

120° spectrally balanced horizontal coverage

Zero special processing needed (Yep!)

Spectrally balanced high output & high headroom

MPT12.0: 12" lows, 12" mids, two 1.4" highs

MPT6.5: two 6.5" lows, two 6.5" mids, one 1.4" highs

MPT Line Array Series: Big Boy Boxes in disguise

MPT = Multi Principle Technology

Practical application of knowledge is technology. Certain objectives and expanded engineering is Multi Principle Technology. To create the MPT Line Array Series all constraints were thrown out. Clear objectives and intents were made and a clean drawing board began filling with engineering ideas.



A very similar process was used to design the MPT48 concert array module and the new MPT Line Array Series. The MPT48 produces sound energy from over 90% of its frontal area. So do the MPT12.0 and MPT6.5 line arrays. More sound, less area, and less phasing issues.

One of the main goals at Rexroat Sound is to create loudspeaker systems requiring the least amount of equalization and DSP processing. "Why", one may ask, "DSP can fix everything". While this may be true at 7 or 8, when it is turned up to 11 the spectral imbalance plays havoc with the sound quality. For it to go loud AND sound good the balance has to be inherent and not digitally created.

While the high range must go the loudest to make a line array concert speaker system actually work the midrange and low range have very distinct responsibilities. The low range *carries* ALL the sound and really must be powerful, smooth, and have bandwidth. There's enough low range to allow a 70Hz subwoofer crossover point; or a 45 Hz speaker protection HP filter. There's also enough midrange. Watt for Watt and efficiency to efficiency the midrange section will keep up with the high range; not usually found in today's concert loudspeakers.



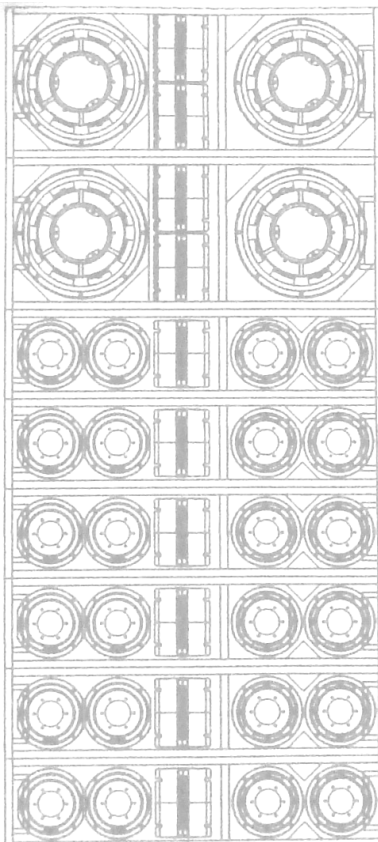
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**MPT6.5**

**MPT12.0**

<p>8.5" x 36.5" x 16"  60  13 ply Baltic Birch – Steel - Aluminum  120° x 15°  Adjustable 1.5°, 3.0°, 4.5°, and 6.0°  2 6.5" driver: 400 Watts &amp; 95dB sensitivity  2 6.5" driver: 600 Watts &amp; 98dB sensitivity  1 1.4" exit driver on 120° x 15° waveguide  160 Watts &amp; 109dB sensitivity  80Hz – 450Hz – 1250Hz  Special settings offered upon request</p>	<p><b>DIMs</b>  <b>LBS</b>  <b>Construction</b>  <b>Dispersion</b>  <b>Flyware</b>  <b>Lows</b>  <b>Mids</b>  <b>Highs</b>  <b>Recommended X-over</b></p>	<p>14.5" x 36.5" x 16"  95  Protective Duratex Coating – Waterproofing  120° x 10°  HD Steel front flyware 10:1 @ 24 boxes  1 12" driver: 1,000 Watts &amp; 99dB sensitivity  1 12" driver: 800 Watts &amp; 99dB sensitivity  2 1.4" exit driver on 120° x 15° waveguide  320 Watts &amp; 109dB sensitivity  80Hz – 450Hz – 1250Hz  See graphs below</p>
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This shows a lightly processed response of an array like what's shown to the left. A 36 dB/oct x-over is used at 71Hz to divide the subs from the line array. Both mid-band x-over points utilize 24 dB/oct filters.

Notice the high-end response; this show's the built in response that becomes usefully flat back in the intended coverage area. Most line arrays have a difficult time producing enough energy beyond the 5, 8, or 10KHz point. Starting with an extra bit at the top helps the power response tremendously.

