## Full-Range Speaker System with MCAP Enclosure - TR130a -

## Principal Design

| General Information |  | Summary |
| :---: | :---: | :---: |
| Document Release Date | 2008/10/26 | This speaker system is a compact 1 cft speaker system with 3 sub-chambers and 6 ducts. Duct lengths may be reconsidered, but shows relatively good performance without changing design. <br> Sound pressure level of lower range $(40-100 \mathrm{~Hz})$ is approximately 18 dB lower than higher range, still lack of low frequency is not tangible while listening music sources. |
| Manufactured Year | 2006 |  |
| Document ID | MCAPAPoo3E |  |
| Model ID | TR130a |  |
| Used Driver(s) | Cantare 5FR MK II |  |
| Alternative Drivers | no suggestion |  |
| Overall Size ( $\mathrm{H} \times \mathrm{W} \times \mathrm{D}$ ) [mm] | $300 \times 300 \times 300$ |  |
| Characteristic Frequencies[Hz] | 59, 66, 67, 97, 114, 118 |  |
| Required DIY Skill | Relatively High |  |
| Designed by | S. Suzuki |  |

## Enclosure Details

| Item | Specification | Drawing |
| :---: | :---: | :---: |
| Number of Sub-chambers | 3 |  |
| Main Chamber | $4.29[\mathrm{~L}]$ |  |
| Sub-chamber \#1 | $3.79[\mathrm{~L}]$ |  |
| Sub-chamber \#2 | 3.97[L] |  |
| Sub-chamber \#3 | 4.70 [L] |  |
| Duct \#1 W $\times \mathrm{H} \times \mathrm{L}[\mathrm{mm}$ ] | $36 \times 36 \times 77$ |  |
| Duct \#2 W $\times \mathrm{H} \times \mathrm{L}[\mathrm{mm}]$ | $36 \times 36 \times 96$ |  |
| Duct \#3 W $\times \mathrm{H} \times \mathrm{L}[\mathrm{mm}$ ] | $36 \times 36 \times 106$ |  |
| Duct \#4 W $\times$ H $\times$ L[mm] | $36 \times 36 \times 168$ |  |
| Duct \#5 W $\times \mathrm{H} \times \mathrm{L}[\mathrm{mm}$ ] | $36 \times 36 \times 168$ |  |
| Duct \#6 W $\times \mathrm{H} \times \mathrm{L}[\mathrm{mm}]$ | $36 \times 36 \times 168$ |  |

## Additional Notes

This enclosure was originally designed for limited model FF125K by Fostex. Original model has much higher response in middle range frequency region, and low boost by control amplifier was required. Cantare's 5 FR MK II matches better than FF125K. 10cm or 12 cm drivers may be used, but 13 cm ones will be better.

Multiple-Chamber Aligned in Parallel (MCAP) Speaker System
Application Report
Frequency Response
$20 \mathrm{~Hz}-400 \mathrm{~Hz}$

$300 \mathrm{~Hz}-20 \mathrm{kHz}$
WTR130a_high-L.wav - FFT Wave



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