



SHINJITSU AUDIO

Luxury Audio Design

HORN I

Changing the resistor and capacitor: The resistor and capacitor values in the crossover circuit of the horn speaker directly impact two important aspects: loudness (sensitivity) and crossover point.

Loudness of the horn: The loudness of the horn, also referred to as sensitivity, can be adjusted by changing the value of the parallel L-pad resistor. The table provided shows the different resistor values and their corresponding loudness levels in decibels (dB). For example, using an 8 Ohm resistor will result in a loudness level of -8 dB or 99 dB sensitivity, while a 0.25 Ohm resistor will result in a loudness level of -29 dB or 74 dB sensitivity.

Crossover points: The crossover point determines the frequency at which the audio signal is divided between the low-frequency drivers and the horn. By changing the value of the capacitor in the crossover circuit, you can adjust the crossover point. The table provided shows different capacitor values and their corresponding crossover frequencies in kilohertz (KHz). For instance, using a 1.33 MFD capacitor will set the crossover frequency at 15K, while a 10 MFD capacitor will set it at 2K.

Blending with low-frequency drivers: The instructions emphasize the need to blend the horn's loudness and crossover points with your low-frequency drivers. This means finding the right balance and integration between the horn speaker and the other speakers in your setup to ensure a cohesive and well-rounded sound. You can achieve this by adjusting the resistor and capacitor values as needed based on your specific requirements and preferences.

In summary, the provided instructions guide you to customize the loudness and crossover point of the horn speaker by adjusting the resistor and capacitor values. By doing so, you can optimize the performance and integration of the horn with your low-frequency drivers, ensuring a harmonious audio experience.



ATTENUATION CALCULATIONS

RESISTOR

8 Ohms = -8 dB or 99 dB sensitivity
5 Ohms = -10 dB or 97 dB sensitivity
3 Ohms = -12 dB or 95 dB sensitivity
2 Ohms = -14 dB or 93 dB sensitivity
1.5 Ohms = -16 dB or 91 dB sensitivity
1 Ohms = -18 dB or 89 dB sensitivity
0.75 Ohms = -20 dB or 87 dB sensitivity
0.5 Ohms = -23 dB or 84 dB sensitivity
0.25 Ohms = -29 dB or 74 dB sensitivity



CROSSOVER CALCULATIONS

CAPACITOR

1.33 MFD = 15K
1.66 = 12K
2 MFD = 10K
2.5 MFD = 8K
2.8 MFD = 7K
3.3 MFD = 6K
4 MFD = 5K
5 MFD = 4K
6MFD = 3K
10MFD = 2K

Greater than 10 MFD or below 2K is not recommended.



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HORN I PHOTO DIAGRAM

