Box Plot For Windows 3.0

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SHAREWARE VERSION 1.0

Box Plot is a Microsoft Windows based program that shows the frequency response and maximum Sound pressure level f a given Loudspeaker/Box Combination.

This Version of Box Plot requires Microsoft Windows 3.0 r later to run. A math coprocessor is not required but really helps speed things up if you want do alot of iterations on the box parameters. (Turn off Auto Plot on slow machines).

If Terms like Qes, Fs, Vas are unfamiliar to you, then this program will be difficult for you to use. It is intended for the audio hobbyist or professional interested in building there own speaker enclosures, or modifying their present system.

If you are interested in building your own speakers, I would suggest that you subscribe to Speaker Builder Magazine. It is a good source of information on this subject.
(Unsolicited advertisement)

History:

Box Plot is based on a program called Boxresponse, which was published in Speaker Builder magazine a while back. Box Plot adds graphical output, MS Windows compatability, printing, file storage, and a couple of other new features to the original BASIC version of Boxresponse.

Operation:

This Program was designed to allow 'almost' real time update of the response plot as box parameters are changed. This is usefull when trying to shoehorn a speaker into a non optimum box. Many different combinations of box parameters can be tried in a short period of time. If Auto Plot is turned on, then clicking on the OK button of the BOX Parameters dialog box will replot the response curves.

Speaker Parameters:

Speaker parameters are entered into a dialog box. When done, click on the OK button to save the parameters. The Parameter names are the Thiele Small Parameters specified on most good spec sheets.

Box Parameters:

Box Parameters are entered in a dialog box. When the OK button is clicked the Box Parameters dialog box stays on the screen. To close the dialog box click on the Close button or use the system drop down menu (upper left of dialog box) to close the box. The reason the dialog box stays on screen is to make it easier to edit parameters and see the effect on frequency response.

There are 6 types of boxes that can be modeled with Box Plot.
Closed Box:
Simple sealed Enclosure.
Closed Box with first order equalizer:
Sealed box with first order filter. The first order filter usually provides subsonic attenuation.
Closed Box with second order filter:
The second order filter is usually an active filter placed before the power amp. This filter can be used to extend the low end, or modify the response of an existing system.
Vented Box:
Box with tuned port.
Vented Box with first order eq:
First order Eq is more usefull here than is a sealed box.
Vented Box with second order eq:
Same as sealed box.

Comments:
The comments field is a text string, 255 chars long that can be used to annotate the graph.

Vent Design:
This box will show the vent length based on the present box/ speaker combination.

Auto Plot:
When the Auto Plot menu item is checked, anytime a speaker or box parameter is changed, the graph will be regenerated. This keeps the graph up to date with the latest parameters. This also may be annoying on slower machines so it can be turned off.

File:

New:
This will reset all parameters to some predefined settings. The settings are based on nothing at all, just some numbers that wont do real wierd things. (The speaker parameters are from a well known manufacturer.)

Save:

Save as:
This will save the speaker, box, and comments in the specified file. (Registered Versions)

Open:
Read a file on the disk. The default file extension is .SPK but has no real significance.

Print:
This will print the response curves as shown on the screen along with the speaker and box parameters. (Registered versions)

In the Unregistered shareware version, files cannot be saved and the response curves cannot be printed. Please register to recieve the complete version, as well as updates and bug fixes, as they become available.

To register Please send $25.00 to
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I will send out a disk with the complete version, and some more on line documentation. If you have suggestions, comments, bug reports or just feel like writing please do so.Let me know what other kinds of programs would be usefull to the audiophile.