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OndaCombineCal.exe

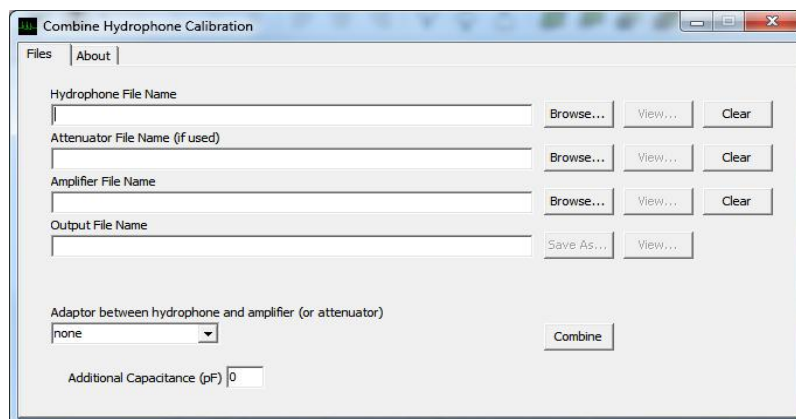# Hydrophone Calibration Combination Utility

Version 1.0.3.0

OndaCombineCal.exe is a utility that is used to calculate combined sensitivity of a hydrophone and amplifier. It takes data from an open-circuit hydrophone calibration file and an amplifier calibration file, and calculates the sensitivity of the hydrophone and amplifier together, compensating for the loading effects of the amplifier. It can also calculate the combined sensitivity with the addition of a right-angle adapter and/or an attenuator.

If you have received the program on a CD, copy it to a folder on a hard drive or flash drive, and run it. (It should not be in "C:\Program Files\" or "C:\Program Files (x86)\".)

The window that appears at startup:
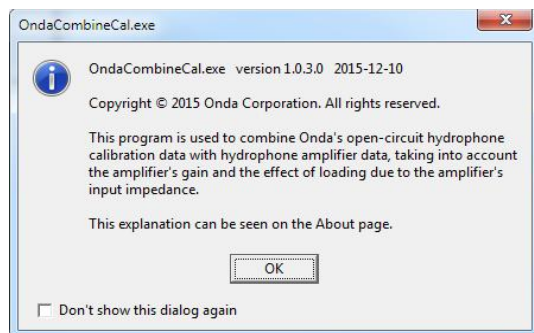
This is how the main window initially appears:

Use the Browse buttons to select files.

The minimum needed will be a hydrophone file and an amplifier file:

The "xxxxxx-xxxx-xx" in the hydrophone file name indicates that it does not include an amplifier. The hydrophone file must not already include amplifier data in order to be combined with amplifier data. If the "AMP_MODEL" line in the file does not show the model as "NONE", then a warning is shown:
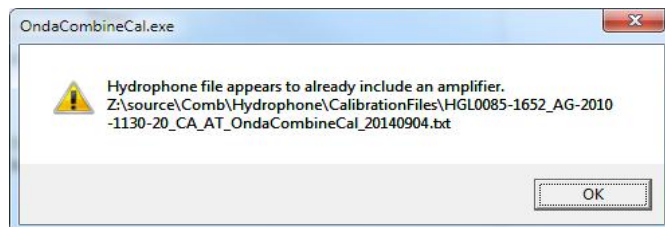
Either "NONE" or "AR-AMAF" (the right-angle adapter) can be chosen, and the appropriate capacitance will be filled in. If you need to use something else between the hydrophone and amplifier (or attenuator) you can type that in, and enter the capacitance of the device.

Not that if the right-angle adapter and an attenuator are being used, the right-angle adapter must be between the hydrophone and the attenuator. The combined calibration will not be valid if not connected this way.

Once files have been selected, click "Combine" to calculate the sensitivity of the hydrophone together with the amplifier, and a name for the new file will be generated. This table shows the naming convention:

HGL0085-1652	AG-2010-1130-20	xx	OndaCombineCal	20140904	txt

Hydrophone Model	Hydrophone Serial No.	Amplifier Model	Amplifier Serial No.	Amp. Nominal Gain dB	Adapter	Program that generated the file	Hydrophone Calibration Date

The adapter will be either "CA" for the AR-AMAF right-angle adapter, or "xx" for no (or unknown) adapter. If an attenuator is used, "_AT" will be inserted after the adapter.

This is how the window appears after clicking "Combine":
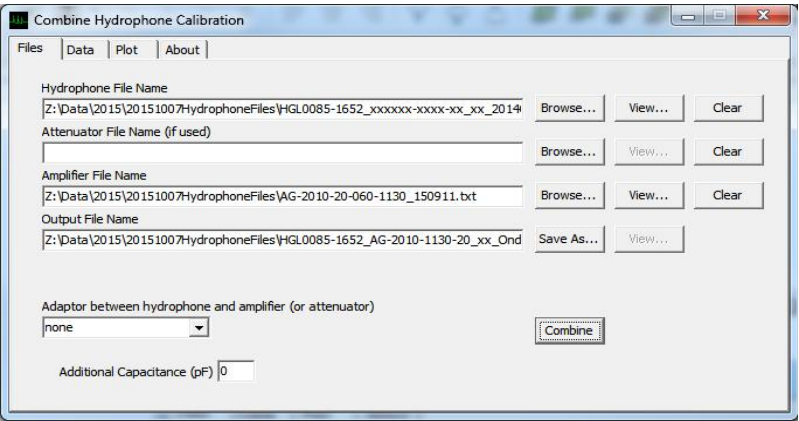
Click on the "Save As..." button to save the file by the generated name or by some other name you choose. If the file already exists, you will see a warning:
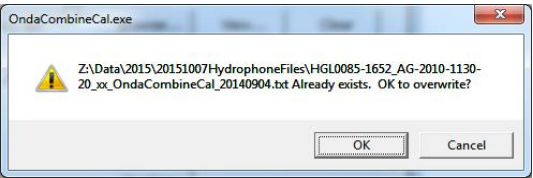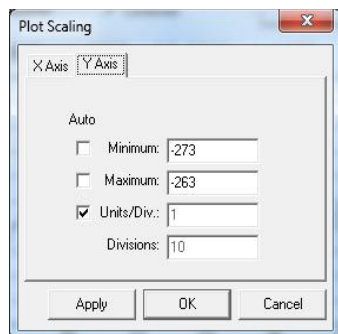

You can view the data either in tabular form or as a plot by clicking the tabs at the top of the window. You can also view the hydrophone, amplifier, and attenuator (if any) data.
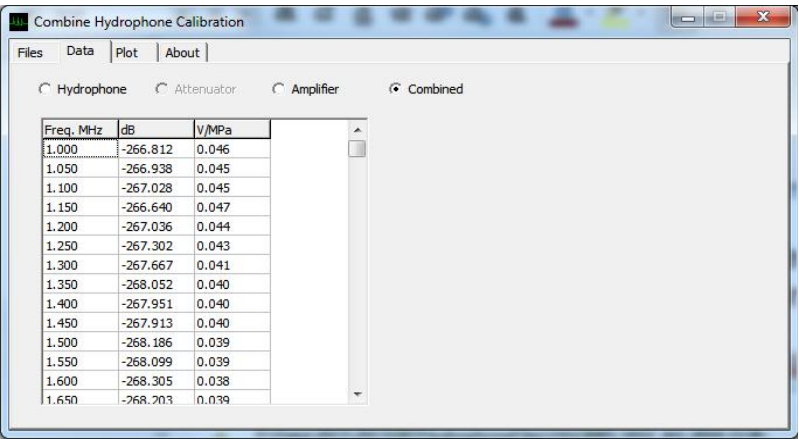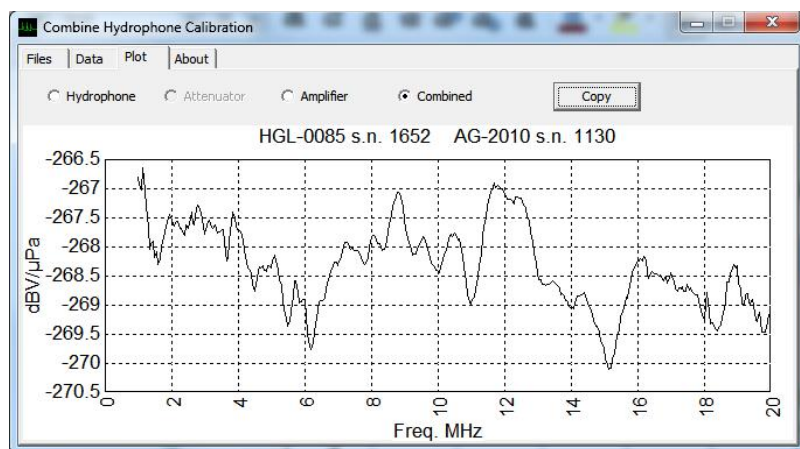
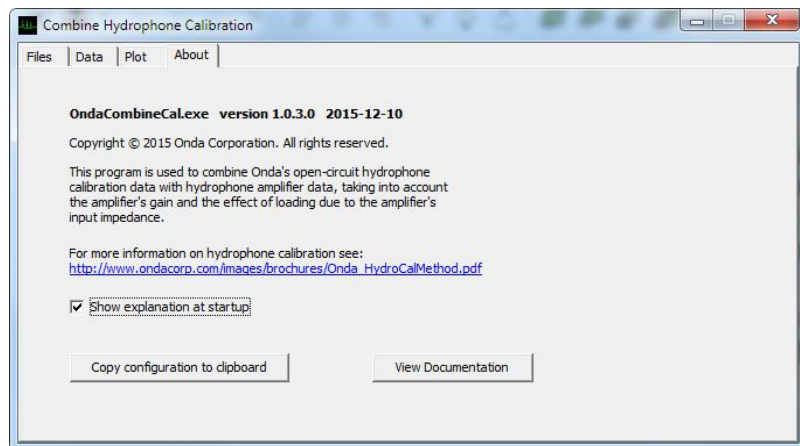Clicking the "Copy" button will copy the plot to the clipboard.

By right-clicking the plot, you can change the scaling:

You can also view the contents of the hydrophone, attenuator, and amplifier files, and the combined text file once it has been saved. Click on the "Files" tab, and click on one of the "View" buttons:

Lastly, the "About" tab shows information about the program:

It also contains a link to a document about the calibration methods used at Onda, and the calculations used to combine calibrations:

http://www.ondacorp.com/images/brochures/Onda_HydroCalMethod.pdf

There is also "Copy configuration to clipboard" button for cases where there may be a need for customer support. The configuration can then be pasted into an email message.

The "View Documentation" button will open this document.

Updated: 12/10/2015