Measuring Coils

General advice:

At Jantzen Audio, we control measure all coils when we manufacture them, to make sure they keep within nominal tolerances on inductance (RDC figures follow inductance figures).

If you wish to control measure coils on your own, please note that you cannot correctly measure coils with a standard type “multimeter”, if the coil in question has a lower DCR than 0.1 ohms.

To measure coil data correctly, the equipment needs a certain level of resistance, to perform the measurements/calculations correctly.

We recommend using a professional grade LCR meter or even better a computer based “CLIO” system, both for coils with an RDC of 0.1 ohm or lower, but also in general.

C-Coils:

To correctly measure the inductance and RDC of C-Coils, you cannot use a professional grade LCR meter or CLIO system alone.

You will need to follow the steps of the measuring method mentioned in this guide.

We recommend using method 2, (Resonant Point with a Capacitor) described in the link below:

http://daycounter.com/Articles/How-To-Measure-Inductance.phtml

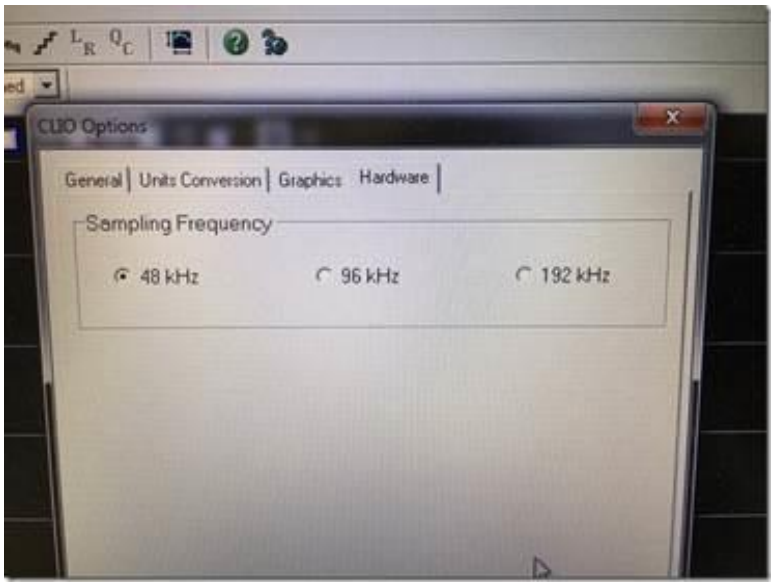
The measuring setup:

A precision capacitor (e.g. one of our 1% tolerance Silver Z-Caps) is connected in parallel to the coil and a resistor in series connection (values are not important).

If you use CLIO to measure it must be set to 48 kHz sampling frequency and be rigged to impedance measuring (sinus function).

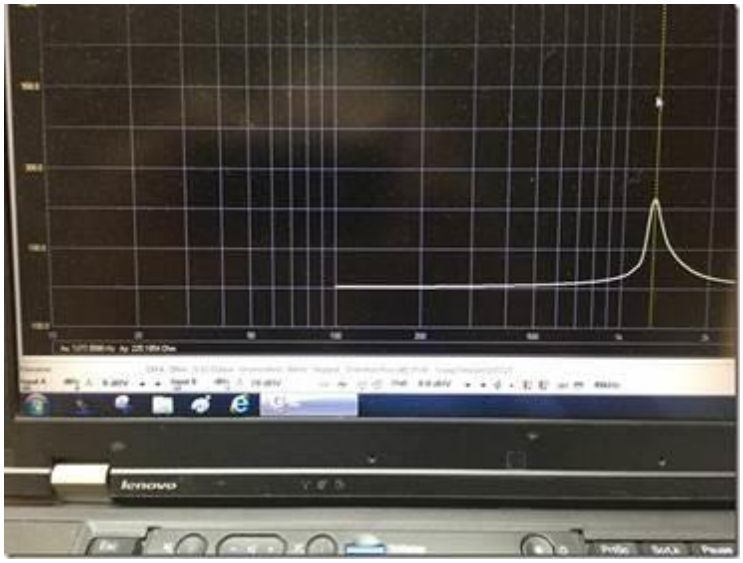
Below is an example of what the measuring setup should look like:

Then you do the impedance measurement, i.e. 100-5000 Hz, depending on the capacitors value (in this example a 5.6 uF was used).



You measure i.e 1.278 kHz resonance point and then insert them in the calculation schematic from the link below:

http://daycounter.com/Articles/How-To-Measure-Inductance.phtml



You will then get an inductance measurement within the 5% inductance tolerance.