JANTZEN AUDIO

Measuring Coils

General notes about coil measurement:

We control measure coils when we manufacture them using a professional Mostek LCR bridge.

This is to ensure that they keep within nominal tolerances on inductance and resistance (DCR).

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

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

To make precise measurements you need to use a professional grade LCR meter with a milliohm function or of available a better option is to use an LCR bridge.

It is also important that you use the correct voltage / Hz settings on your device, as using incorrect settings will either give an incorrect or unprecise reading.

JANTZEN AUDIO

Measuring C-Coils (toroidal gap-core inductors:

All C-Coils are control measured before they are shipped.

If you still wish to control measure a C-Coil, you cannot use a professional grade LCR / milliohm meter on its' own.

You either need a professional grade LCR bridge **or** you will need to follow the steps of the measuring method mentioned in the following 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

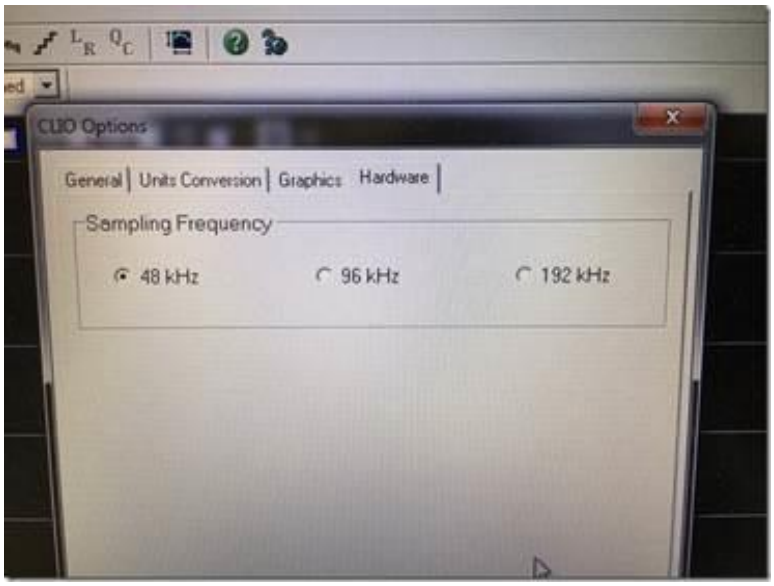
The measuring setup:

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).

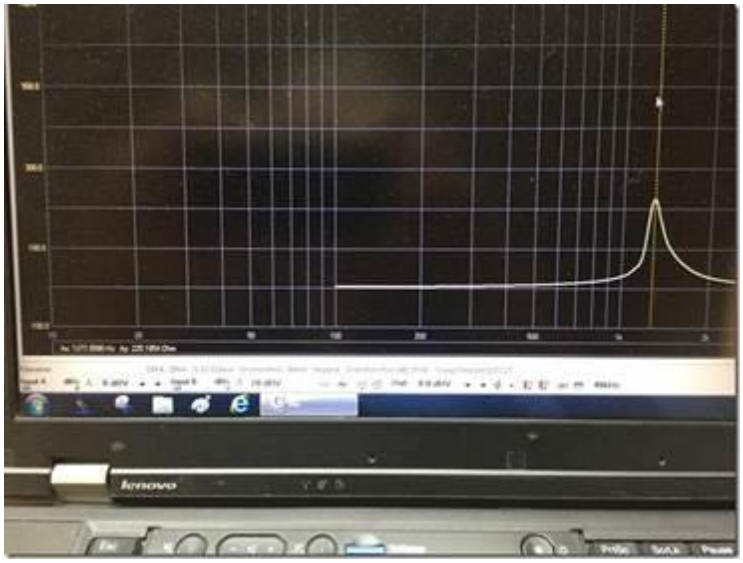
Below is an example of what the measuring setup should look like:

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



2.) **Your measurement is for example 1.278 kHz resonance point.**
You insert your measured value in the calculation schematic via the link below:

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



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

Please note that it should have said "reference capacitor" (C) in the photo schematic example below.