Getting the 4 channel scope going

Summary

The 4 channel scope setup uses two CS328 or CS328A Cleverscope Acquisition Units (CAU), a CS022 link cable, and the 4 channel scope software, cleverscope4.exe. If using the CS328A, make sure you have the NI-VISA drivers loaded. See the updating USB pdf.

Binary Version

Both CAU's must be programmed with version cscope_pld v5331 (CS328) or cscope_pld v6431.bin (CS328A) or later. Please use the ROM loader to update the CAU's. See the instruction on upgrading the hardware that came with your installation disk (which is also where you will find the ROM loader – copy ROM Loader.exe to your program files\cleverscope directory to use it).

Connect up the units

It's useful to place the CAU's on top of each other. Connect the CS022 link cable between the two units. Plug into the Link socket, and make sure the line on the plastic housing is uppermost for both plugs.

Connect each unit to the computer using a USB cable. You should hear the computer ding as you plug in each unit. [If you want, you can copy the program Files/cleverscope directory to a new directory such as program files/cleverscope_dual. If you do this you can run two copies of the Cleverscope application (one from the original cleverscope directory, and the other from the cleverscope dual directory), and start up in the order in which they were plugged in. In this way you can run both CAU's at the same time to make sure they work properly, or have two independent scopes running).
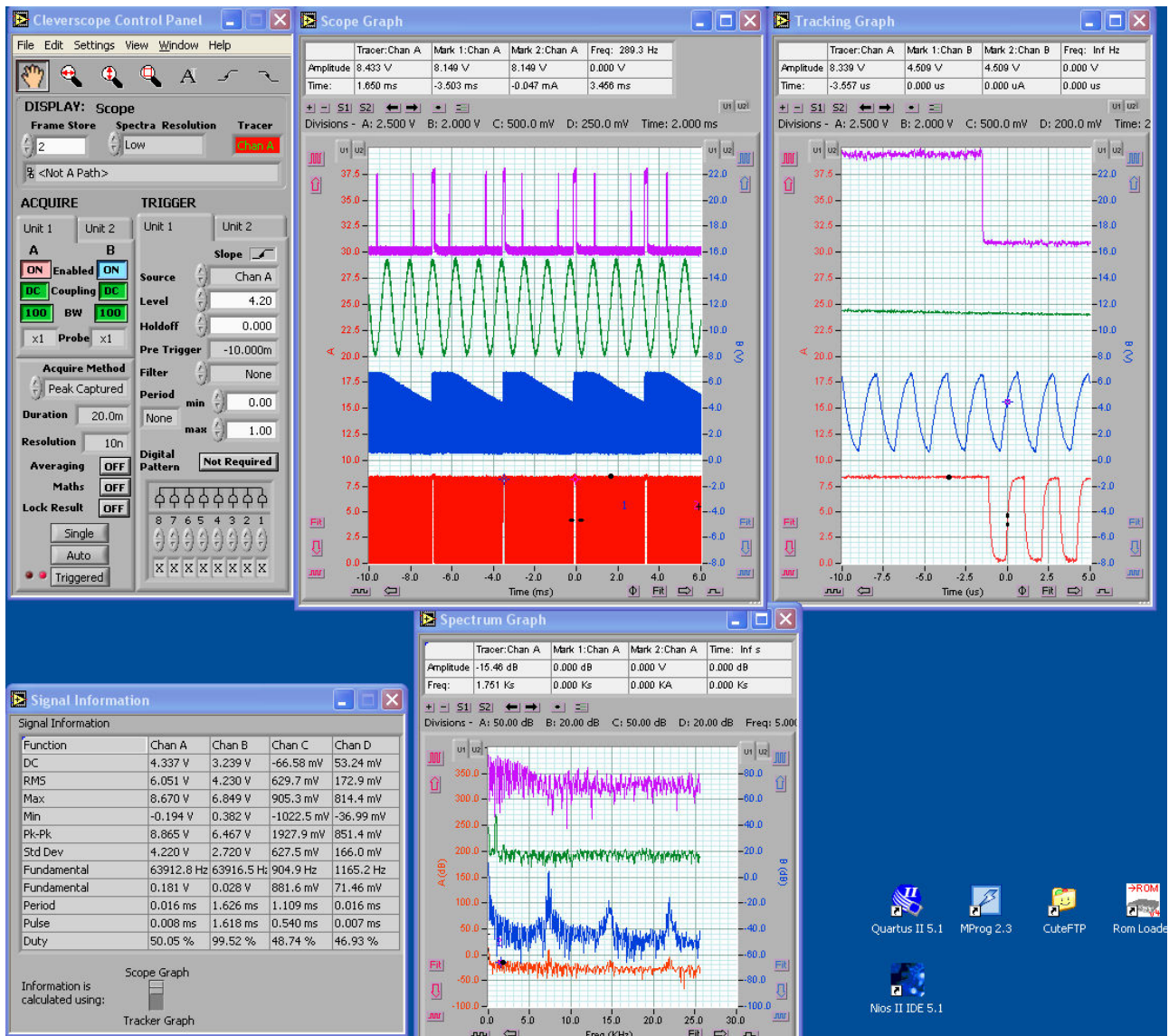
Connect some signal sources, and you are nearly ready to go.

Ready the Cleverscope4 application

Go to http://www.cleverscope.com/resource/ and download Cleverscope4.zip into your 'program files\cleverscope' directory. Unzip into the same directory. You may make a short cut to cleverscope4.exe and put it onto the desktop (we do offer an installer, but if you do it this way you only have to download 3.7 Mbytes!).

Run the Cleverscope4 application

Double click on your cleverscope 4 shortcut icon as normal. The 4 channel version should power up. Here is a screen shot:

You will see that the control panel and graphs have tabs for both units. We've done it this way to make a one-to one correspondence with the physical units. You can turn on or off channels, and select coupling and BW on the Acquire Panel. You can select which unit triggers (only one unit can trigger at a time) by selecting the trigger tab, and on the tab you can select which channel triggers, and the trigger spec as normal. Dual triggers will be implemented later.

On a graph you can select which channel the axis refers to. On the left you have Channel A for unit 1 and 2, on the right you have Channel B for unit 1 and 2. If you click on a graph, and use the Tab key, you can quickly move from channel to channel, and the application will automatically show the correct axis.

In the information area the channels are called A, B, C and D. This can be a little confusing and we are work out ways to make it clear.

You should find that most dialogs have tabs for the two units, and you can choose the appropriate unit to make changes for.

The mouse scroll wheel acts as virtual knob on whatever control you last selected.

The version of cleverscope that formed the base for Cleverscope 4 is now quite old. We anticipate getting the application up to the latest standard as an ongoing project. There are still some defects in the application, and these will be fixed.

Some defects:
1. You cannot use the dual trigger system.
2. There are still some situations where things get confused. We have to work on this. The easiest way out is to quit the application, cycle the power on both units, and start again.

All the same, it seems to be working well enough to be useful. We will be improving it.