



**Diagnostic Survey for
CM221 Counter Equipped
Magnetometers
Revision 2**

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Distributed with MagLog 2.883 and Later

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Geometrics is now distributing two Diagnostic Surveys as part of the MagLog software that can be downloaded from Geometrics ftp site:

<ftp://geom.geometrics.com/pub/mag/Software>

Choose the file, [maglog_latest.exe](#) to download and install MagLog with the Diagnostic Surveys. The Diagnostic Survey swill typically be installed in the same directory as MagLog:

[C:\Program Files\Geometrics](#)

You can now Start a new survey and use the Diagnostic Survey as a template for a single magnetometer, or use the Grad_Diagnostic.Survey as a template for a gradiometer.

Normal values for the various slots are:

mag – A trace indicating magnetic field variations

signal – Between 600 and 1500 after 15 minutes of operation with the sensor properly oriented

Depth – Between 100 and 9900

Alt – Between 100 and 9900

Bright – Between 5332 and 5893 (11.4 V and 12.7 V) after 15 minutes of operation

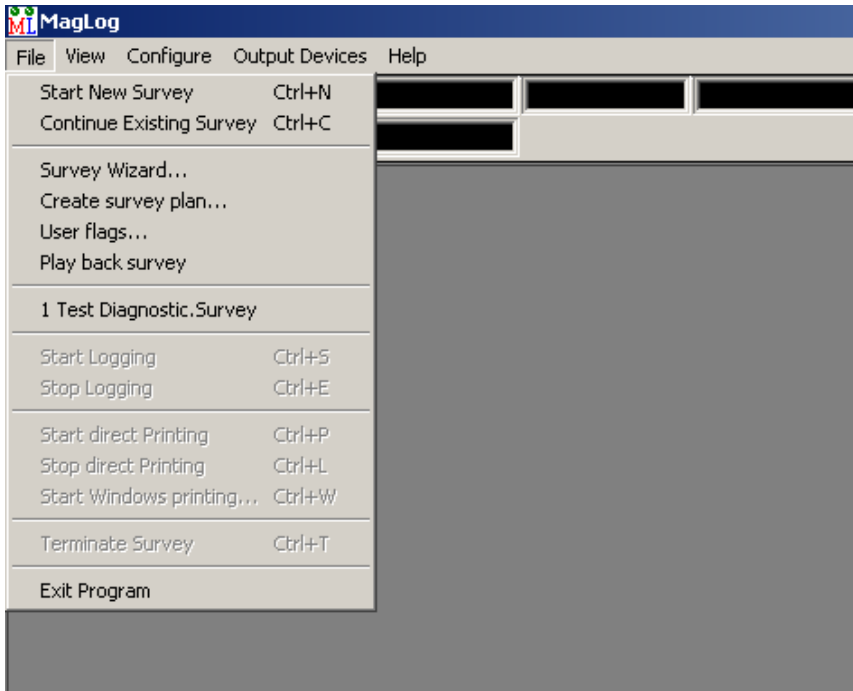
RF Effort – Less than 2500 (4.2 V) after 15 minutes of operation

Heat – Approximately 1600 (2.0 V) at room temperature. Maximum is about 3400 (6.5 V) and minimum is about 0800 (0 V)

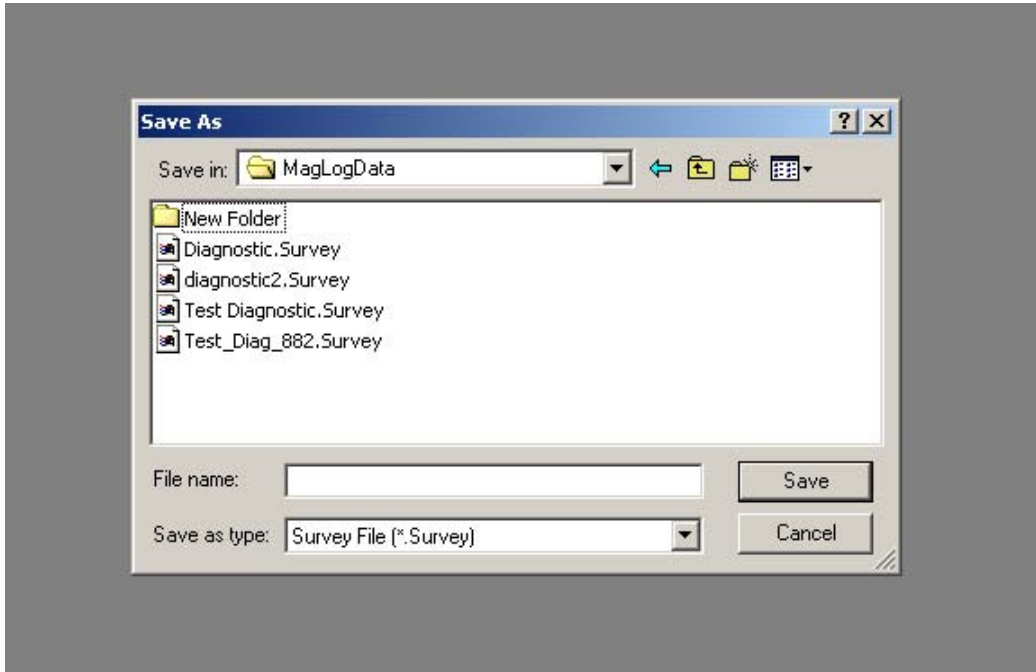
+28V – Between 24.0 and 33.0

+21V – Between 20.0 and 23.5

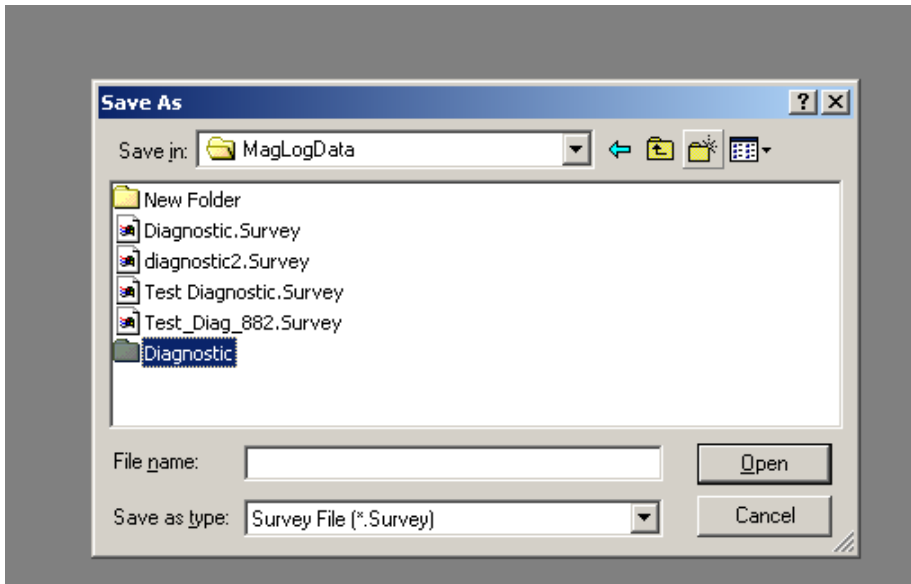
Start by choosing Start New Survey from the File menu.



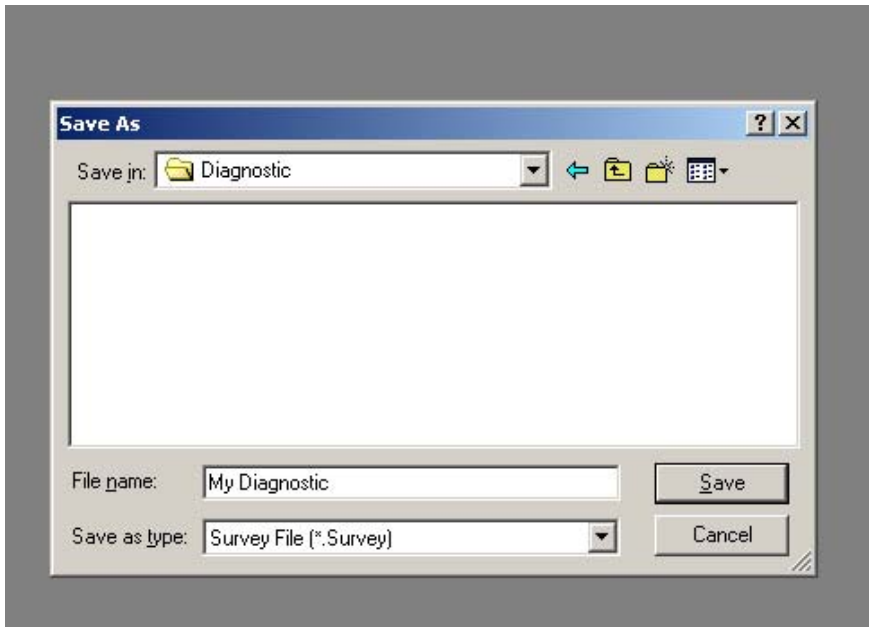
Next choose a location for your survey.



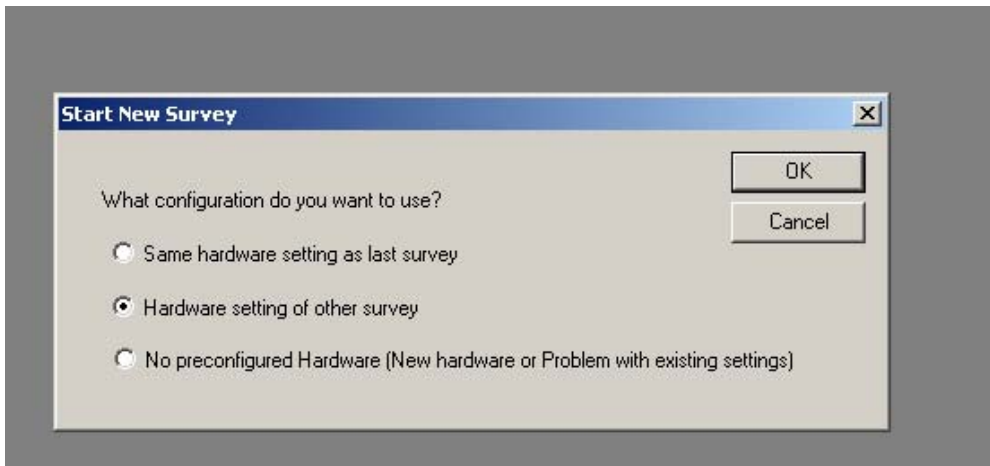
You can choose to make a new folder by clicking on the icon with an asterisk, then naming the folder as shown below.



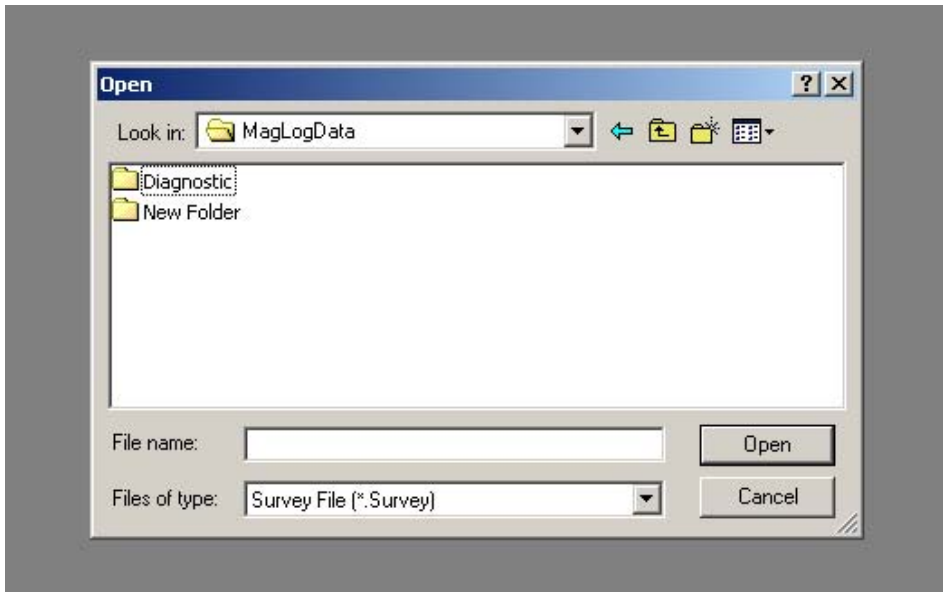
Press the Enter Key after naming the new folder until the Save As dialog box shows no files or folders.



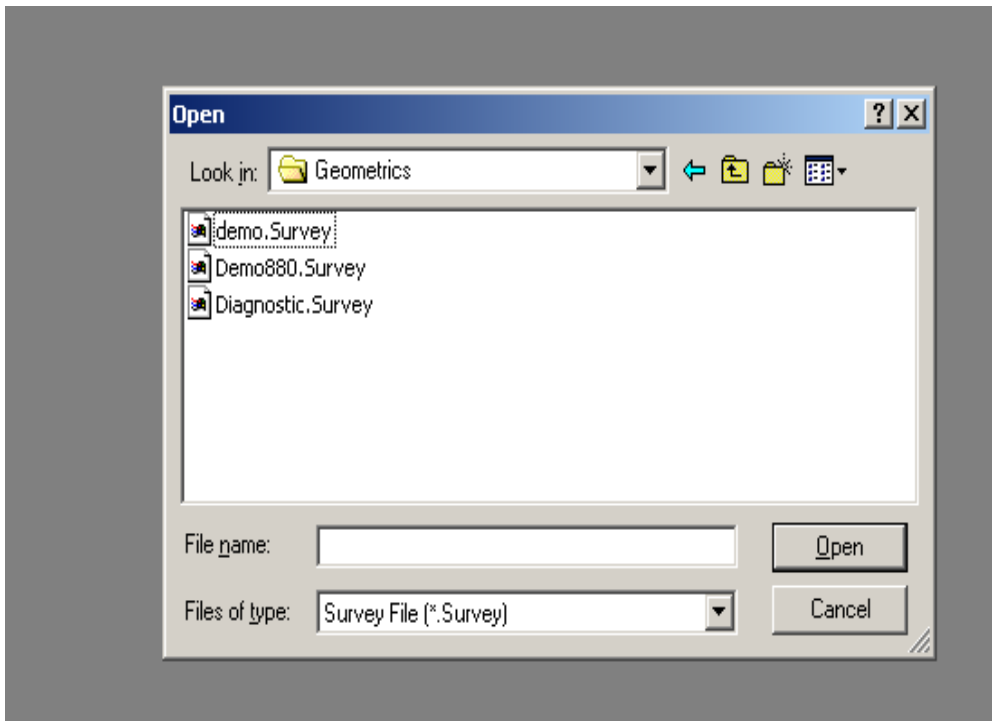
Choose Hardware setting of other survey and click the OK button.



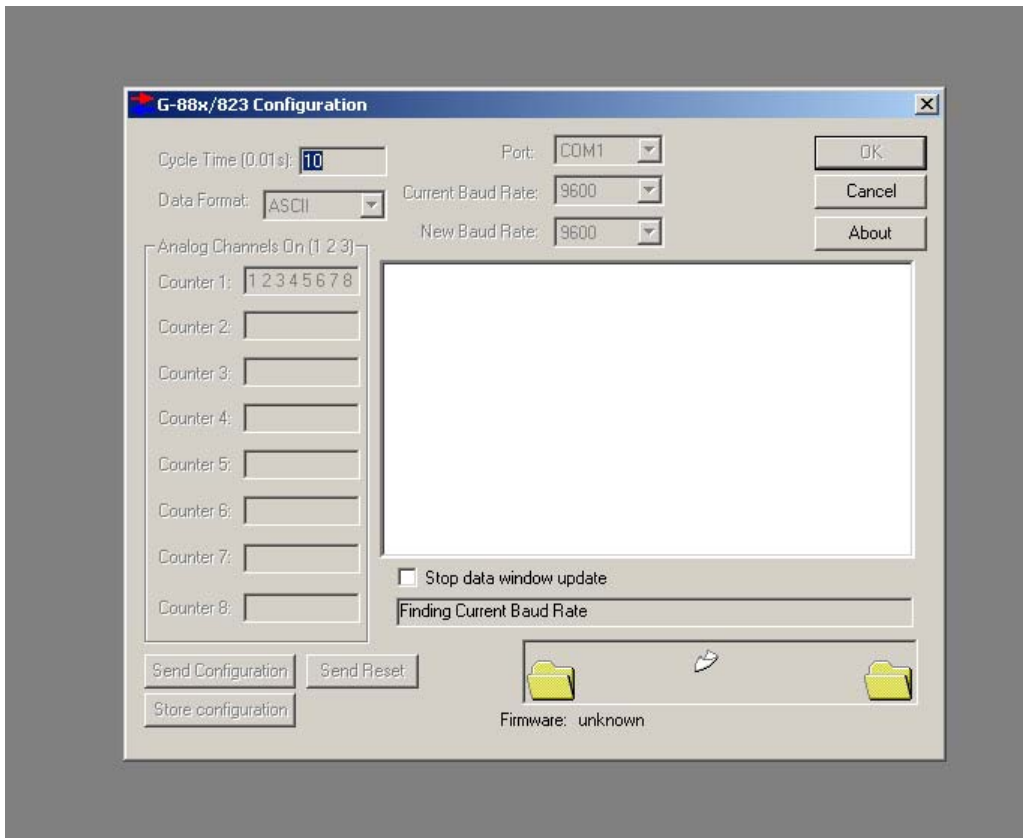
Choose the folder where the template Survey is stored.



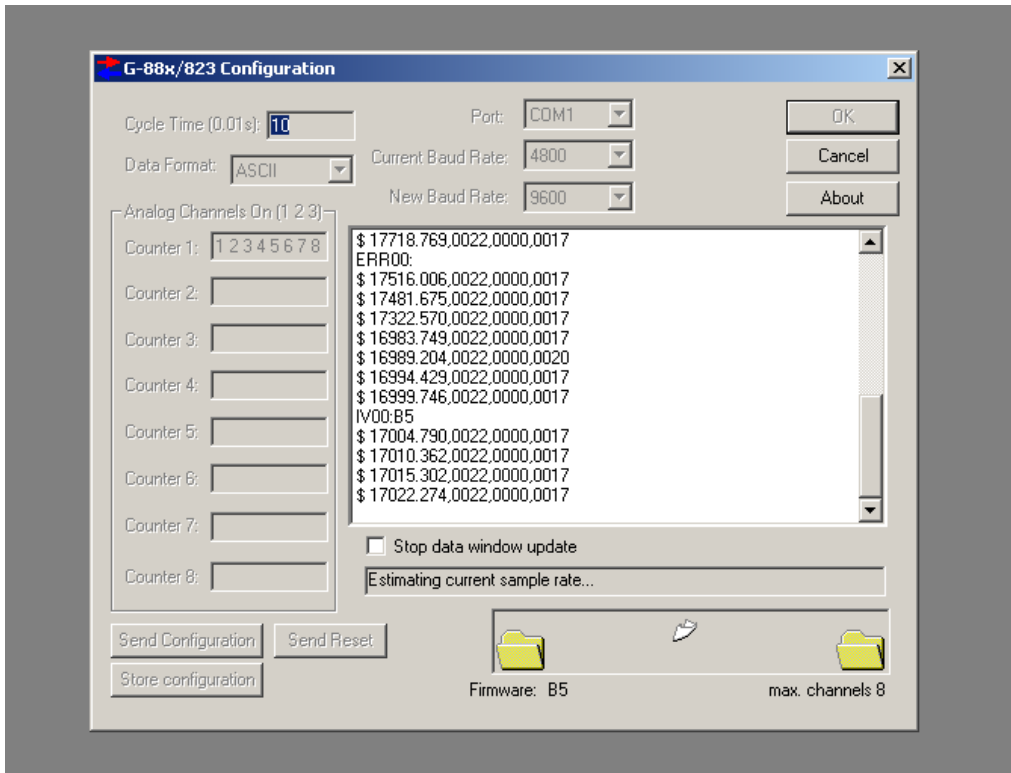
Use the Look in: drop down dialog to navigate to the correct folder. (In this case, C:\Program Files\Geometrics)



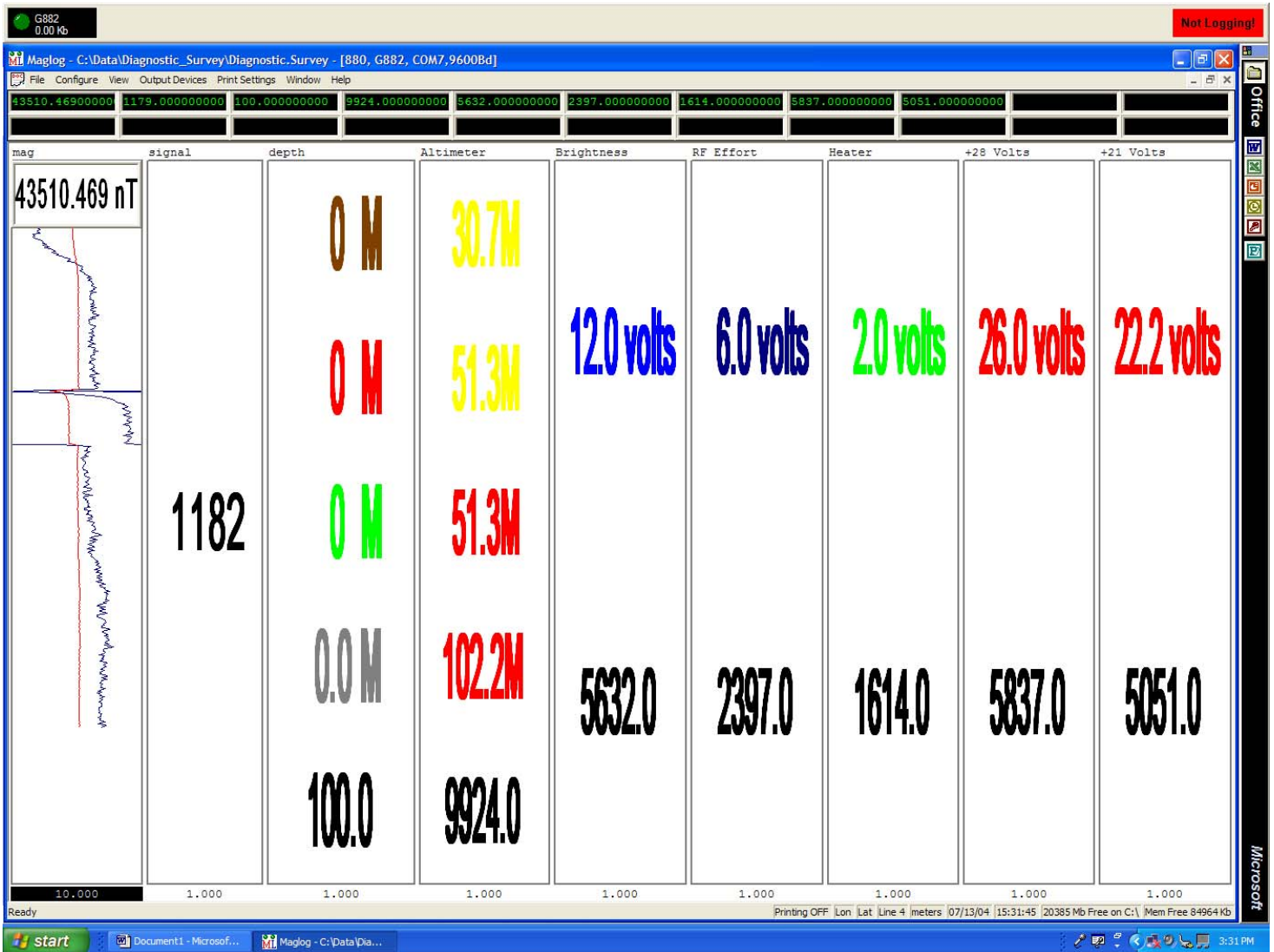
The G-88x Configuration dialog will appear. If the Port doesn't match the port used in your system, you will have to click the Cancel button one time after waiting about 15 seconds. Then the Port dialog and some others will be enabled for you to make changes.



After some time data will scroll and the tool will send commands to configure the magnetometer(s).

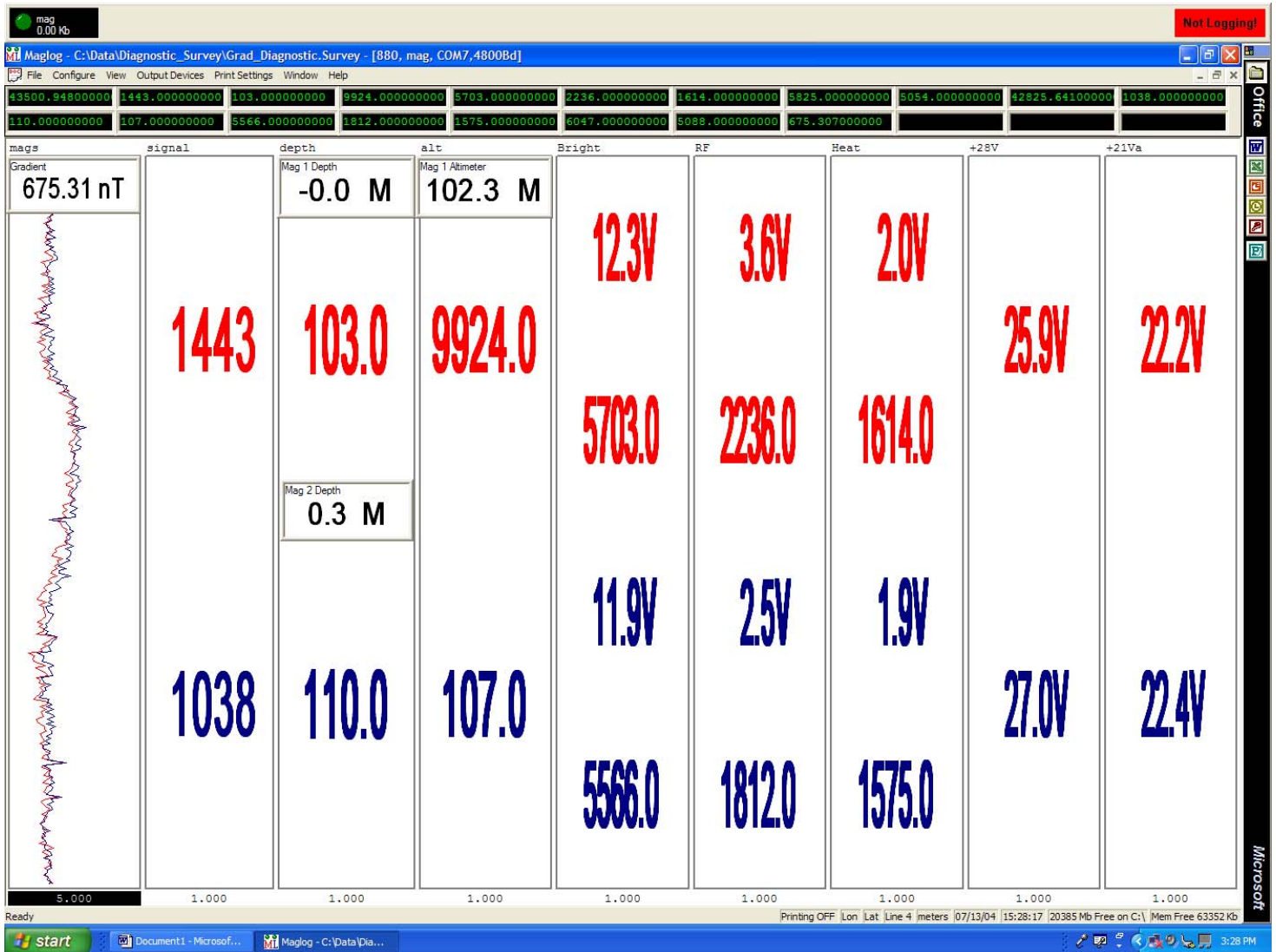


The Diagnostic Survey should look like the picture below:



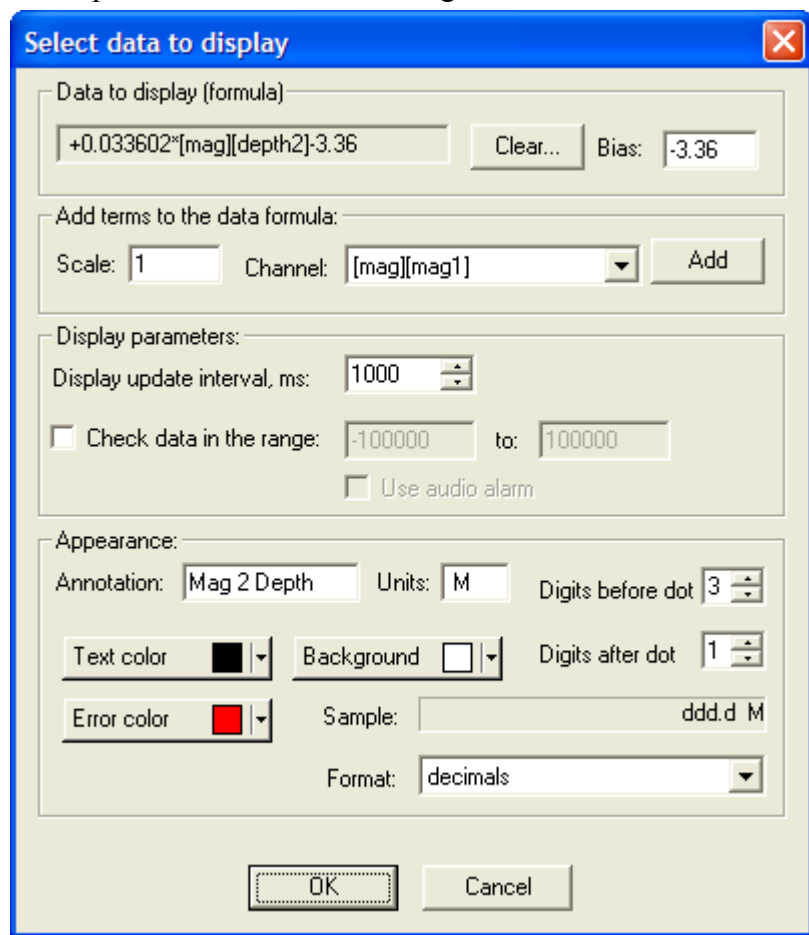
Mag is shown with a Mini-window and a traditional scrolling display. The blue pen is 10 nT full scale and the red pen is 100 nT full scale. Approximate Depth is shown five times. Brown is for 100 psia. depth transducers Red is for 250 psia depth transducers. Green is for 500 psia depth transducers. Grey is for 1000 psia depth transducers. Black is for raw data. Altimeter is shown five times. Top yellow is for 500 KHz transducers with 30 M range. Lower yellow is for 500 KHz transducers with 50 M range. Top red is for 200 KHz transducers with 50 M range. Lower red is for 200 KHz transducers with 100 M range. Brightness, RF Effort, Heater, +28 Volts, and +21 Volts are displayed with calibrated upper numbers and raw data lower numbers.

The Grad_Diagnostic Survey should look like the picture below:



Red pen and numbers signify data from Mag1 (Master). Blue pen and numbers signify data from Mag 2 (Slave). Mini-windows are used to display Gradient, calibrated depths, and calibrated altimeter.

A sample mini-window edit dialog is shown below:



You can right-click on the mini-window and choose edit to display this dialog. First click the Clear button. Then you can use calibration data from your fish to fill in Bias and Scale boxes. Choose the correct Channel from the list and click the Add button. Click the OK button for the changes to the mini-window to take effect.