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LogView

User's Guide

(Rev A, 2/12)

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1. Installing LogView

This manual is intended to facilitate the installation, launching and configuration of LogView. It is not intended to be a substitute for the on-line manual or for the datalogger user's manuals.

Please consult the LogView Online Help and the individual datalogger's manuals for more detailed information regarding the operation of LogView and the LC-n series dataloggers.

1.1 Installing LogView

In most cases, simply inserting the CD into the CD drive will start the LogView install process, however not all drives or Personal Computers allow an install to "autorun" so it may be necessary to start the process manually. Using Windows Explorer, navigate to the CD drive and double click on the file "setupLV_2_x_x_xxxx.exe" to start the install process.

The LogView Install Wizard will step the user through the program installation. If the operating system of your PC is as new as XP, Service Pack 3 then you may not need to install drivers for your datalogger. Should you find that your USB datalogger will not connect, then the program: CDM2xxxx.exe, located on the install CD will install drivers for you. A PC re-boot is required before the new drivers will take affect.

2. Starting LogView for the first time

Launching LogView is easy and can be accomplished two different ways. Double clicking on the desktop icon:

Or via the Start button:

Programs -> Geokon -> LogView

When you open LogView for the first time, you will be prompted to create a workspace name. The workspace name can be any combination of letters and numbers and, ideally, will be descriptive in nature (see Figure 1).

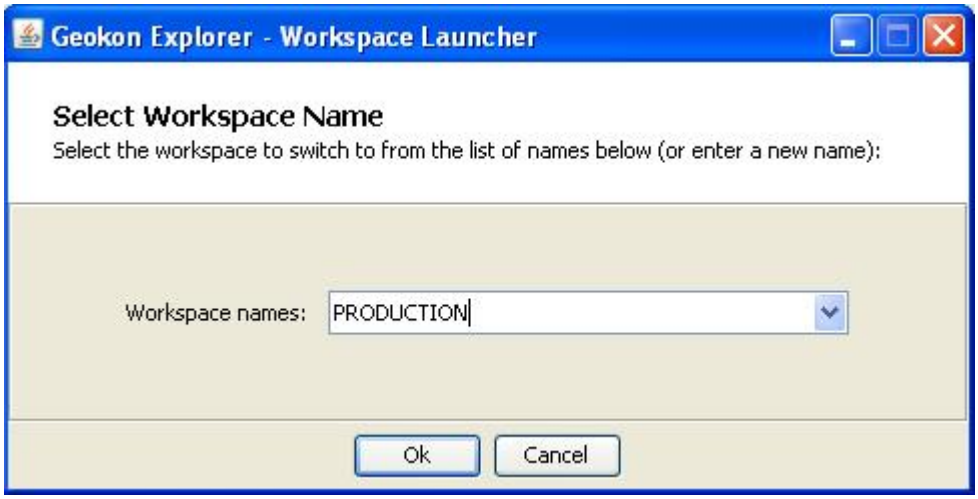

Figure 1 - Workspace Name

Once you've selected the name for your workspace you will be prompted to choose or create a folder on your PC where all the workspace elements will be stored. As can be seen in Figure 2 below, the default workspace location is in a folder name the same as the workspace name under a special shared folder reserved for workspaces. In Windows XP this folder is located at: C:\Documents and Settings\All Users\Shared Documents\Geokon\LogView\Workspaces and for Vista and Windows 7 it's located at: C:\Users\Public\Public Documents\Geokon\LogView\Workspaces.

LogView appends the name of the new workspace to this shared folder and uses it as the default location for the new workspace. The user is free to select a different location, either by entering it directly, or the Browse button may be used to navigate to a different folder location or to create a new folder. This workspace location will be stored in the LogView configuration for subsequent application access. After workspaces are created, all future user access to a workspace is always by name.

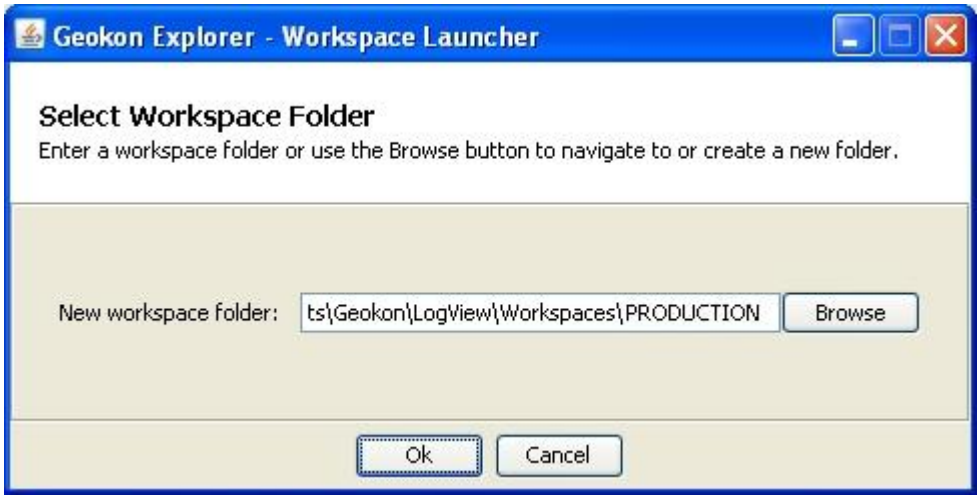

Figure 2 - Workspace Folder

That's all that is required to create an initial workspace. Figure 3 below illustrates LogView's main window and shows the new workspace, PRODUCTION, in the Project Explorer:

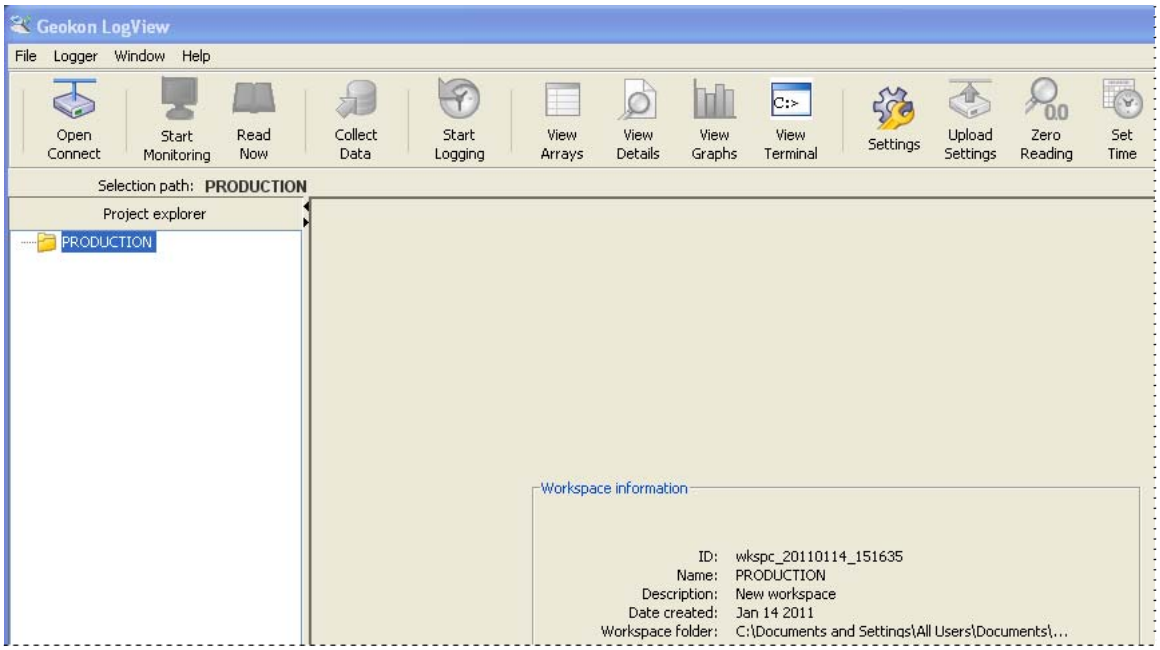

Figure 3 - Main Window

As seen in the Figure 4 below, LogView "Project" objects can be added to a workspace by right-clicking on the workspace and using the menu tools.

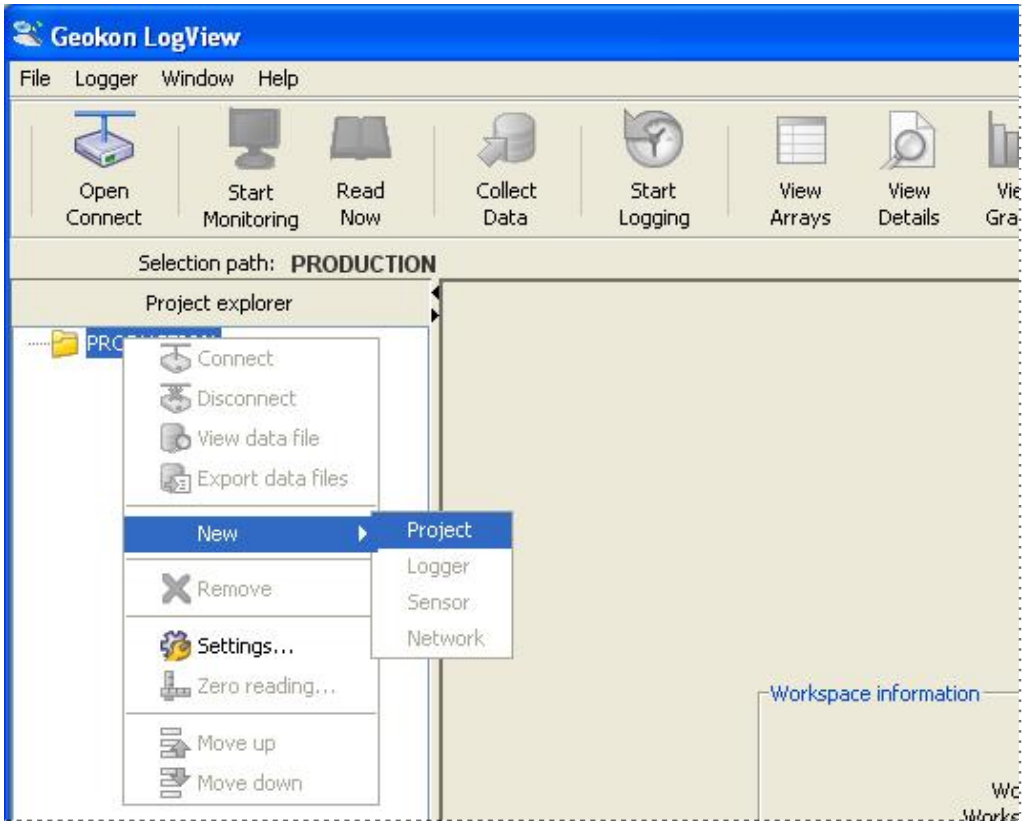

Figure 4 - Context Menu

When adding new projects, a dialog box is displayed, giving the user an opportunity to name and add a description for the new project (see Figure 5):

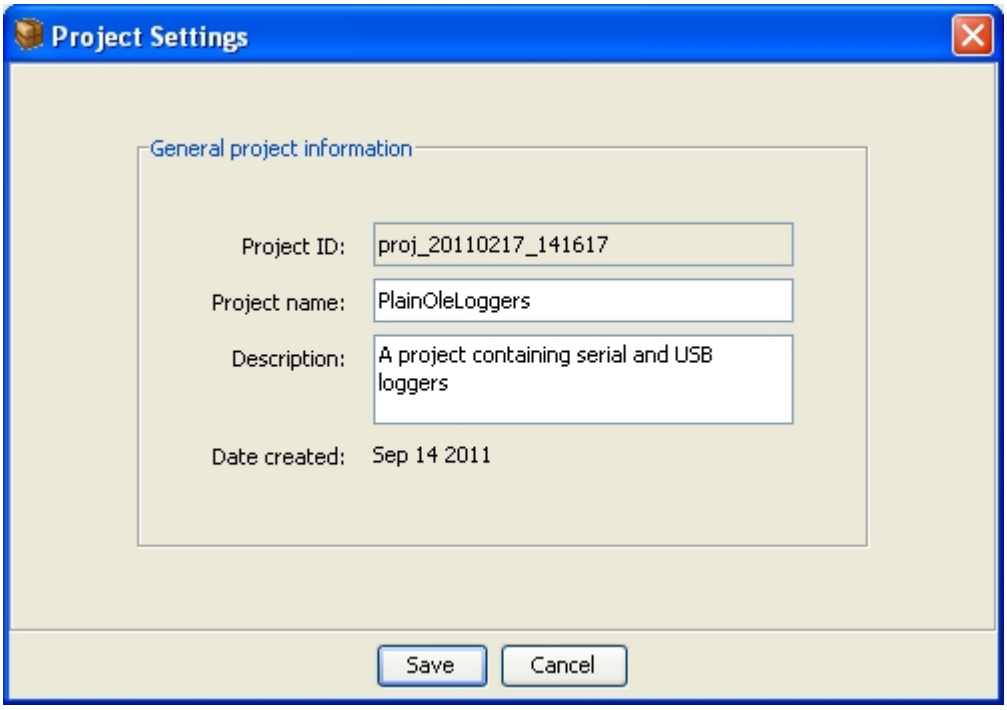

Figure 5 - Project Settings

Below is an example of the Project Explorer after a project has been added:

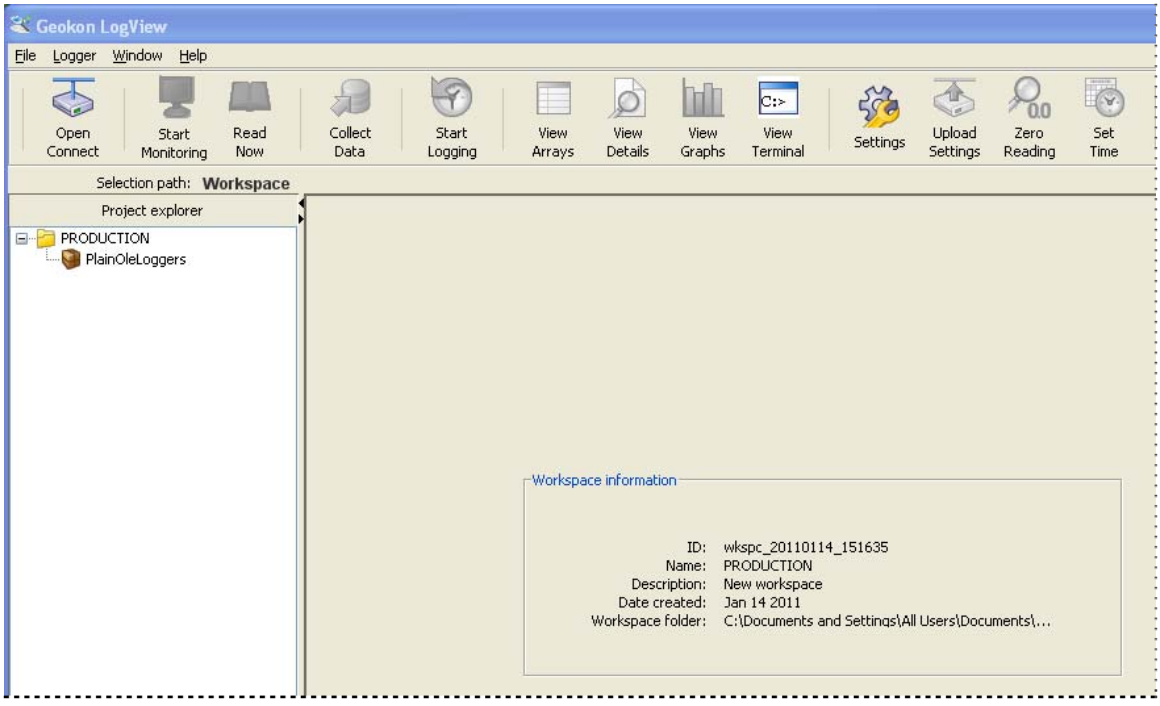

Figure 6 - Project Explorer with Project added

In a similar fashion to adding Projects to Workspaces, Dataloggers can be added to Projects by right-clicking on the Project icon in the Project Explorer and clicking on “New”, then “Logger” from the resulting context menu. This causes the Datalogger Settings window to be displayed (see figure 7). See section 2.3.5 (8002-4-3 and 8002-16-3) or 3.3.5 (8002-1-3) in the Geokon Datalogger Instruction Manual as well as the on-line help topic “Working with Dataloggers” for more details on adding dataloggers to projects.

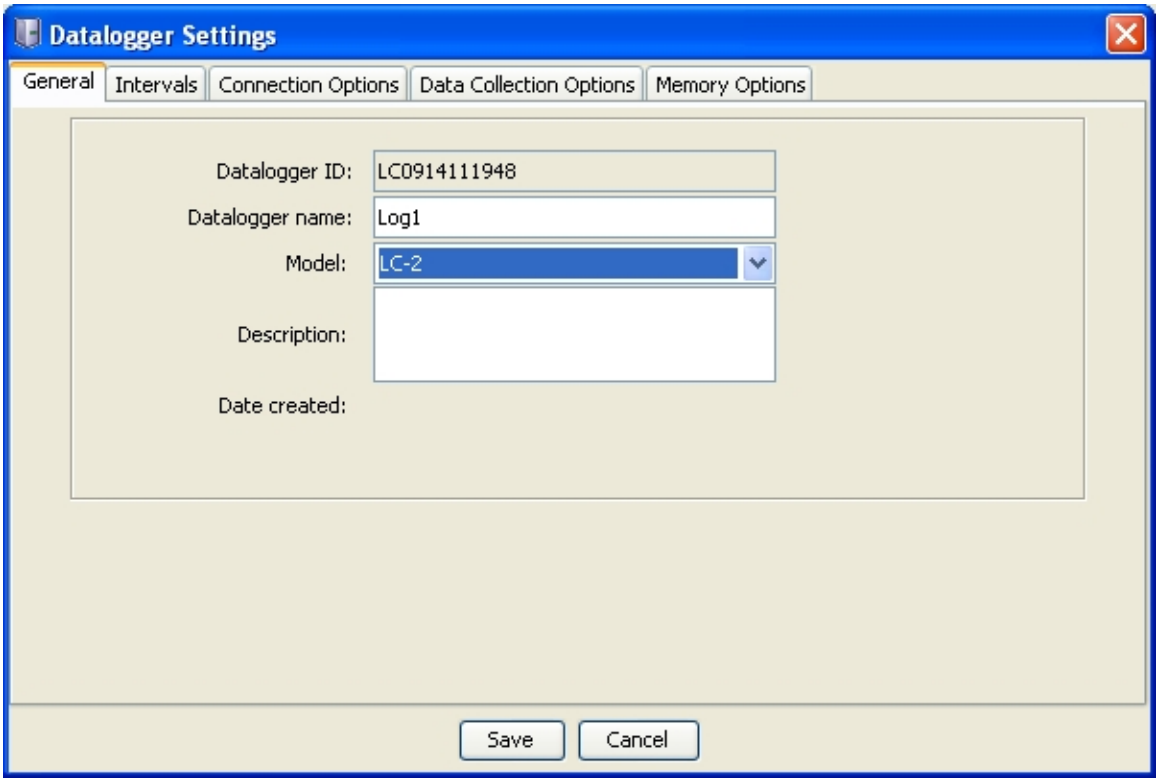

Figure 7 - Datalogger Settings

Figure 7 above, illustrates the General Setting tab and allows entry of various settings such as, name, model and description. All of the settings for a datalogger are broken up into sections accessed by clicking on the appropriate tab (see above). After the settings from all the tabs have been entered, click on “Save” to create the new logger. (See figure 8 below.)

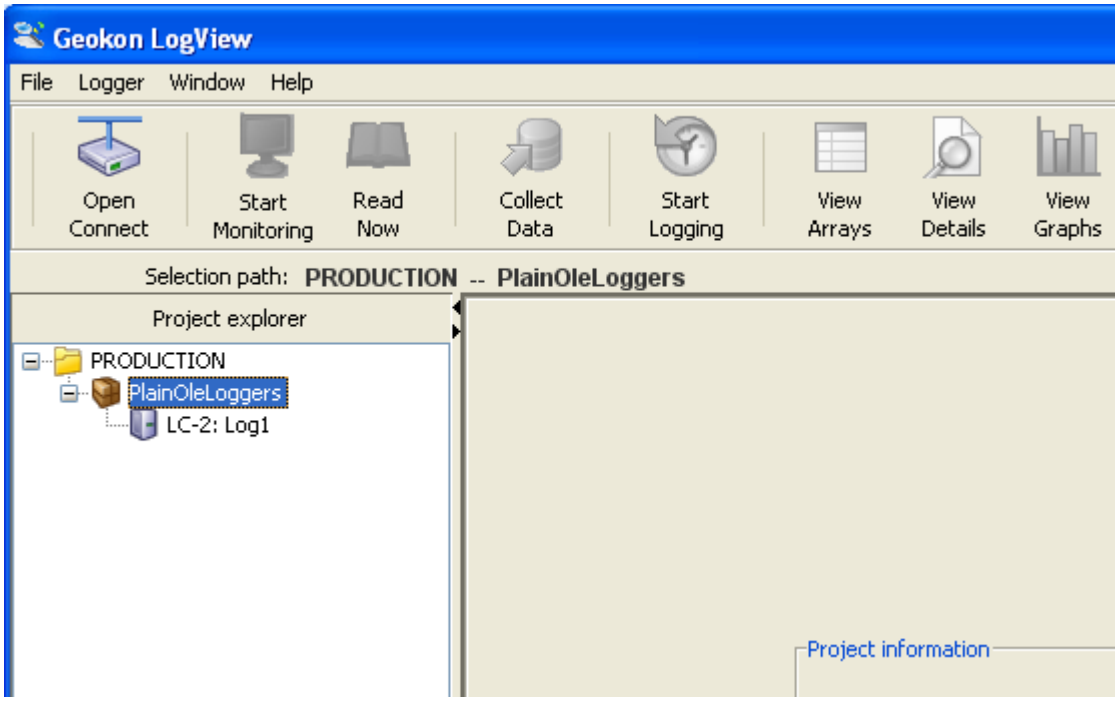

Figure 8 - Workspace, Project and Datalogger

A Sensor is the final element that needs to be added to define the complete configuration of a data logging system. Just as Dataloggers were added to Projects, Sensors can be added to Dataloggers by right-clicking on the Datalogger icon in the Project Explorer and clicking on "New", then "Sensor" from the resulting context menu (see figure 9).

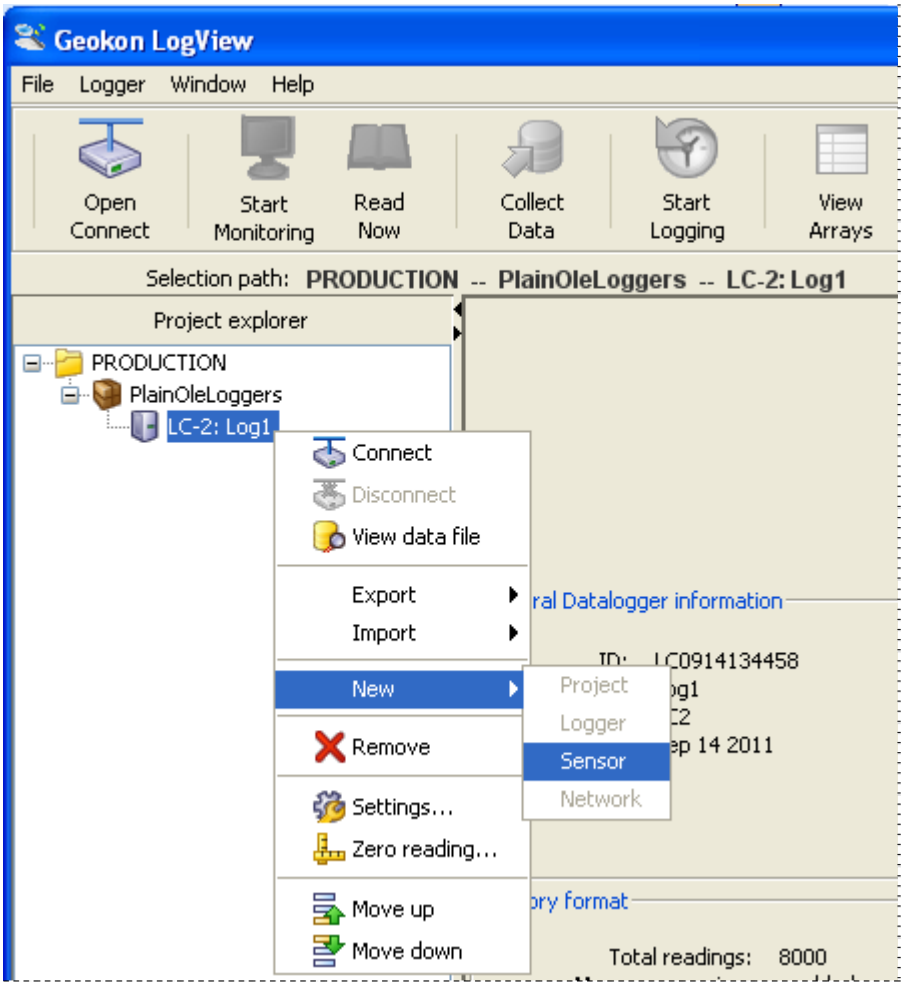

Figure 9 - Adding a Sensor

This causes the Sensor Settings window to be displayed (see figure 10 below). This window allows one sensor's parameters to be modified or multiple sensors' parameters. The number of channel selection "buttons" on the left hand side of the window depends on the type of datalogger that the sensor(s) are being added to. See section 3.8 (8002-4-X and 8002-16-X) or 4.6 (8002-1-X) in the Geokon Datalogger Instruction Manual as well as the on-line help topic "Working with Sensors" for more details on adding sensors to dataloggers.

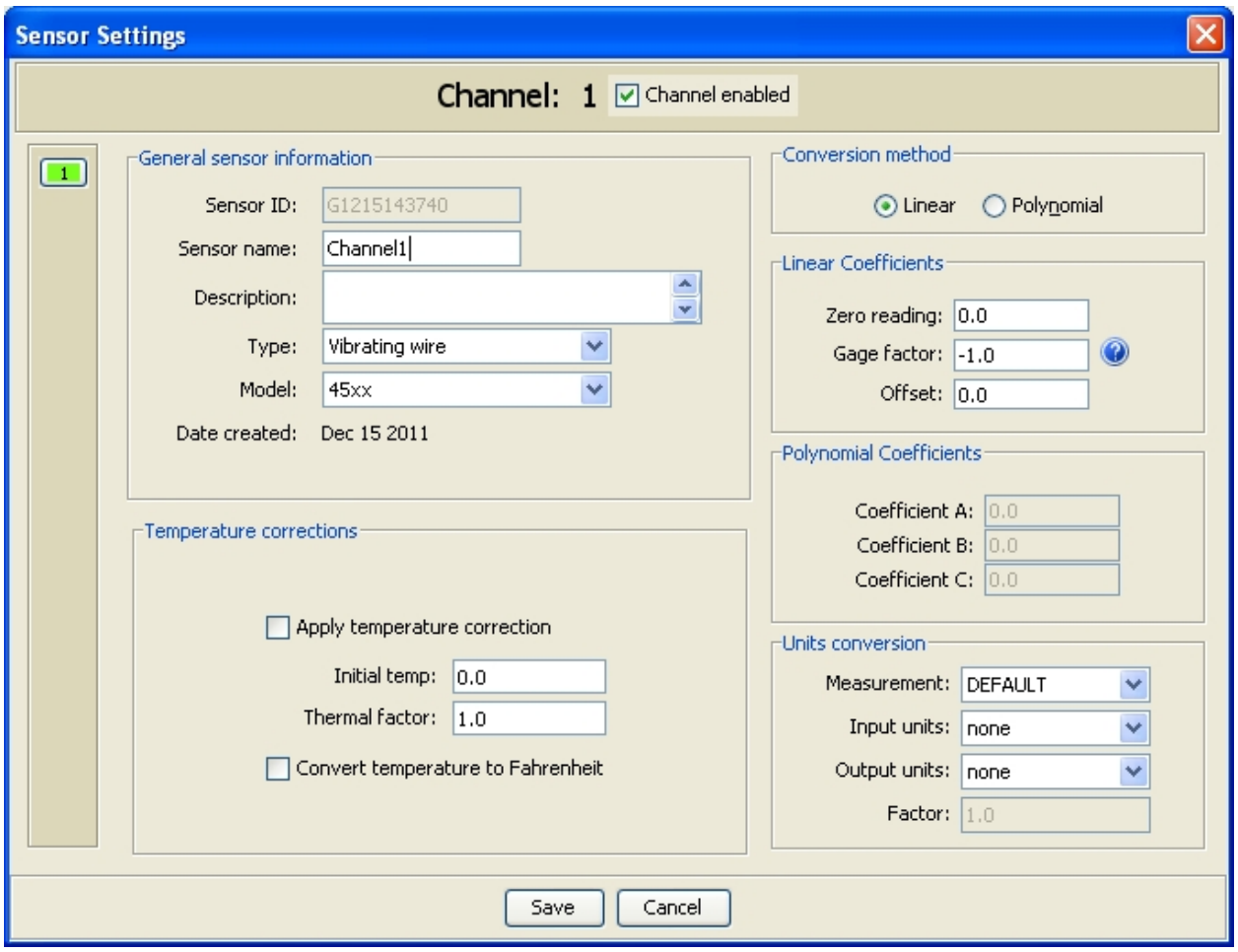

Figure 10 - Sensor Settings

Note the blue round "button" next to the gage factor textbox in the Linear Coefficients section of the Sensor Settings. Clicking the button will display the following dialog box (See figure 11):

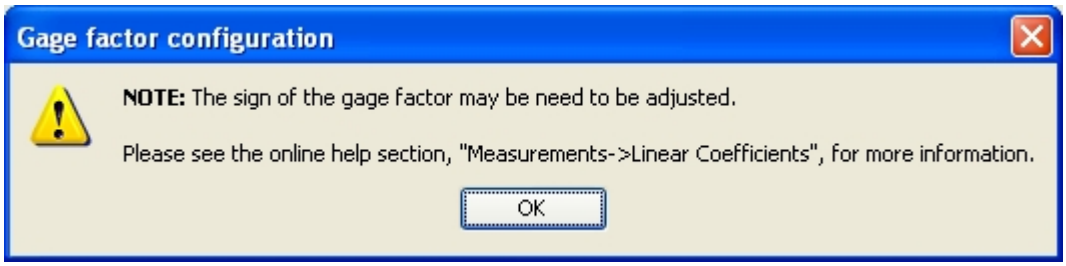

Figure 11 - Gage factor configuration warning

This dialog box is shown to inform Geokon's customers of calibration changes that may affect their sensor readings, especially with new sensors. For all sensors calibrated after 11-02-2011, the change (from zero pressure) in digits, multiplied by the gage factor to get engineering units, is calculated as the Current Reading (**R1**) minus the Initial Reading (**R0**). For these sensors, the Linear Gage Factor will need to be negated before entry into the LogView Gage factor.

For some sensors, prior to the above date, the calculation was performed as **R0 - R1**. For these sensors only, the Linear Gage Factor may be entered directly into the LogView Gage factor.

Please check the calibration sheets received with your sensors to determine the formula used and if the gage factor needs adjusting.

Figure 12 illustrates the "PRODUCTION" workspace with the project "PlainOleLoggers". In the Project Explorer, you can see that the "PlainOleLoggers" project is expanded and it contains a datalogger named "Log1" (LogView prefixes datalogger names with the datalogger type). Also notice that "Log1" has a sensor "Channel1" defined for it (LogView prefixes sensor names with the channel number CHn).

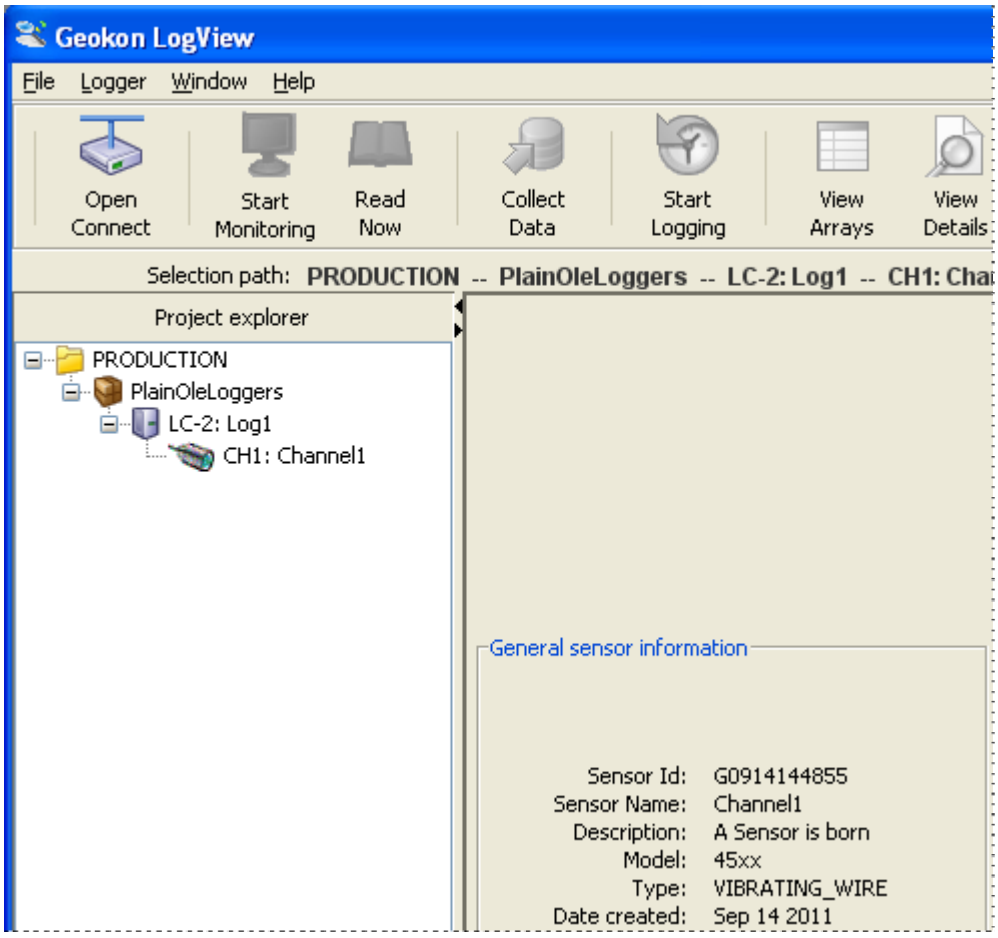

Figure 12 - Workspace, 2 Projects, a Datalogger and Sensor

Each Project object, such as Dataloggers and Sensors, have "settings" associated with them. Once again, by right-clicking the object in the Project Explorer you can edit the Datalogger and Sensor settings - modifying parameters such as COM port settings, Gage Factors, etc.

Online help is available at all times by pressing the “Help” Toolbar button, the “F1” key or by accessing the “Help topics” menu item from the Main Menu.

3. Connecting to a Datalogger

3.1 LC-2 RS-232 Connection (8002-1-1, 8002-1A-1, 8002-4-1, 8002-16-1):

Connect the supplied LC-2 RS-232 Communications cable (COM-108) to the COM port of the LC-2 datalogger. The protective cap on the datalogger COM connector is removed by pushing in and turning. Plug the DB-9 end of the RS-232 Communications cable into the host computer's RS-232 port (either internal or external via a USB to Serial converter).

3.2 LC-2 USB Connection (8002-1-2, 8002-1A-2, 8002-4-2, 8002-16-2):

Connect the supplied LC-2 USB Communications cable (COM-109) to the USB port of the LC-2 datalogger. The protective cap on the datalogger USB connector is removed by pushing in and turning. Plug the USB-A end of the USB cable into an available USB-2.0 port on the host computer.

NOTE: On certain PCs with operating systems older than XP, Service Pack 3, an 8002-X-2 may require the installation of a driver to properly communicate with the PC. If the PC does not recognize the datalogger's internal USB to serial converter then the driver may be installed by executing the program, CDM2xxxx, on the LogView Install CD.

3.3 Determining COM Port Numbers:

When connecting an 8002-1-1 or 8002-1A-1 datalogger to a PC with an internal serial port(s) the COM Port number that LogView requires is usually COM1 or COM2 but, occasionally may be COM3 if the PC has more than one internal serial port. Figure 13 below illustrates that the PC has 2 serial ports, one internal (COM1) and the other via a USB to serial converter (COM13).

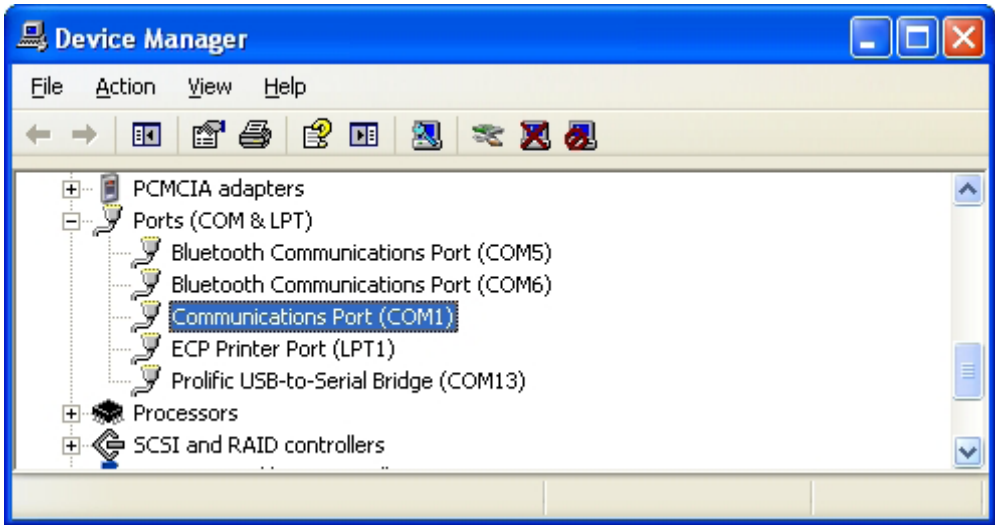

Figure 13 - RS-232 Serial COM Ports

When connecting an 8002-1-2 or 8002-1A-2 datalogger to a PC, the COM Port number that LogView requires can be any number and depends on how many other devices are attached to the PC such as, internal serial ports and Bluetooth devices.

The figure below (see figure 14) illustrates that the PC has 3 serial ports, one internal, COM1 and the other two via USB to serial converters, COM13 and COM3.

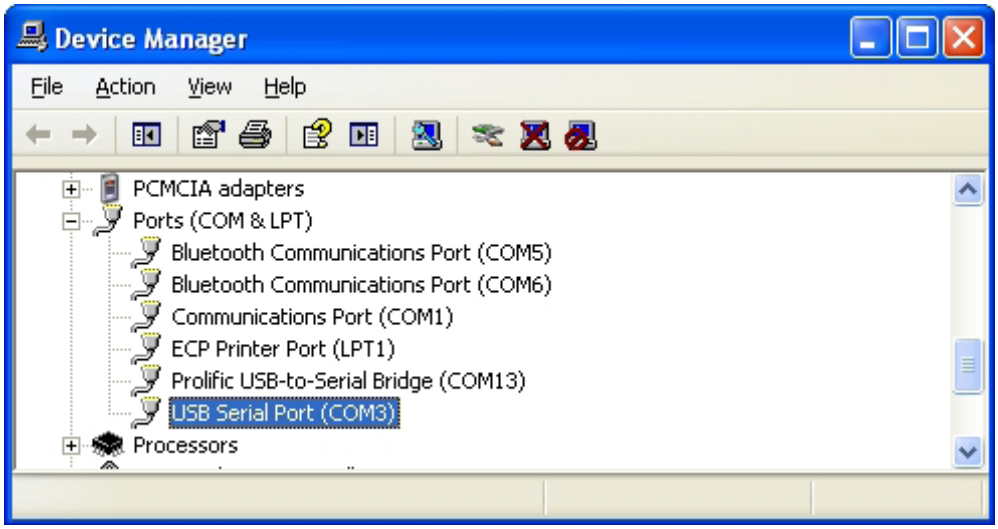

Figure 14 - USB COM Ports

HINT: With the Device Manager (above) open, an easy way to determine which COM port an 8002-1-2 datalogger is attached to is to disconnect the cable and see which COM device disappears from the Device Manager Ports list.

3.4 Establishing a Connection:

After determining the appropriate COM Port for a datalogger, a LogView connection can be established by following the steps below:

1. Select a previously created Datalogger object from the Project Explorer and click on the "Settings" button from the LogView Toolbar. Alternately, a "new" Datalogger can be created by right-clicking a "Project" in the Project Explorer and selecting "New" then "Logger" from the resulting context menu. The Datalogger Settings dialog should be displayed (see Figure 15).

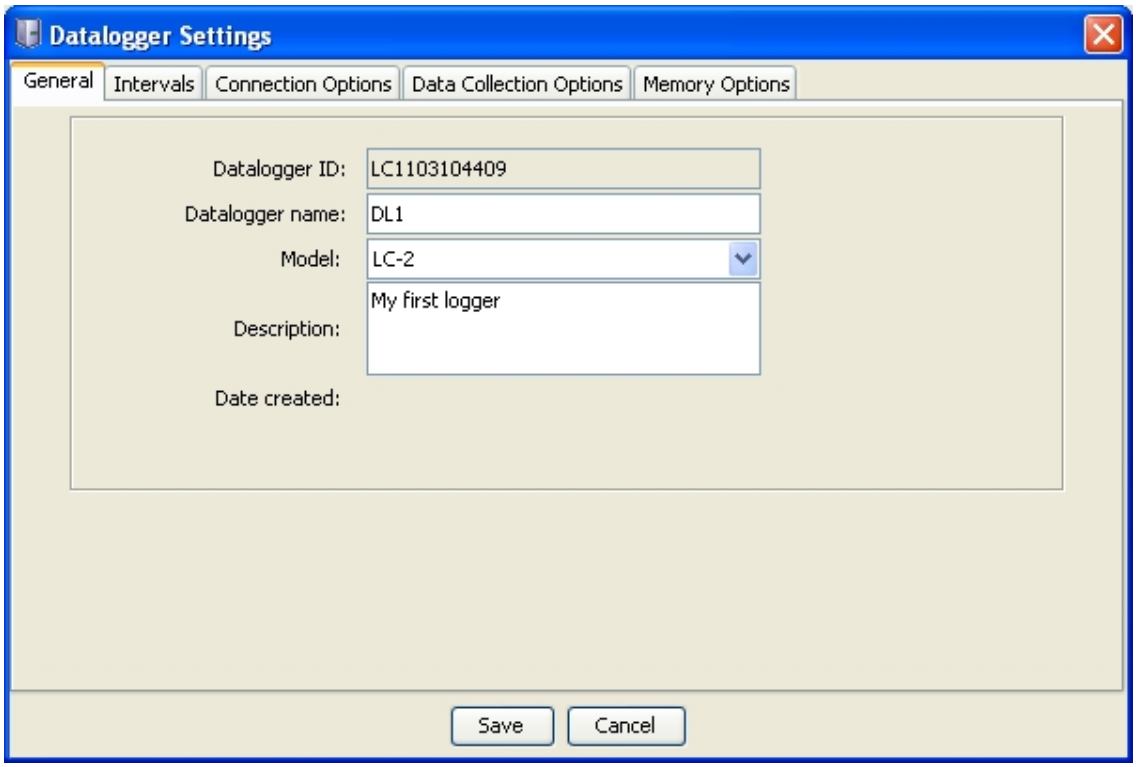

Figure 15 - Datalogger Settings

2. Click on the “Connection Options” tab to display the settings required to establish a datalogger connection (see Figue16).

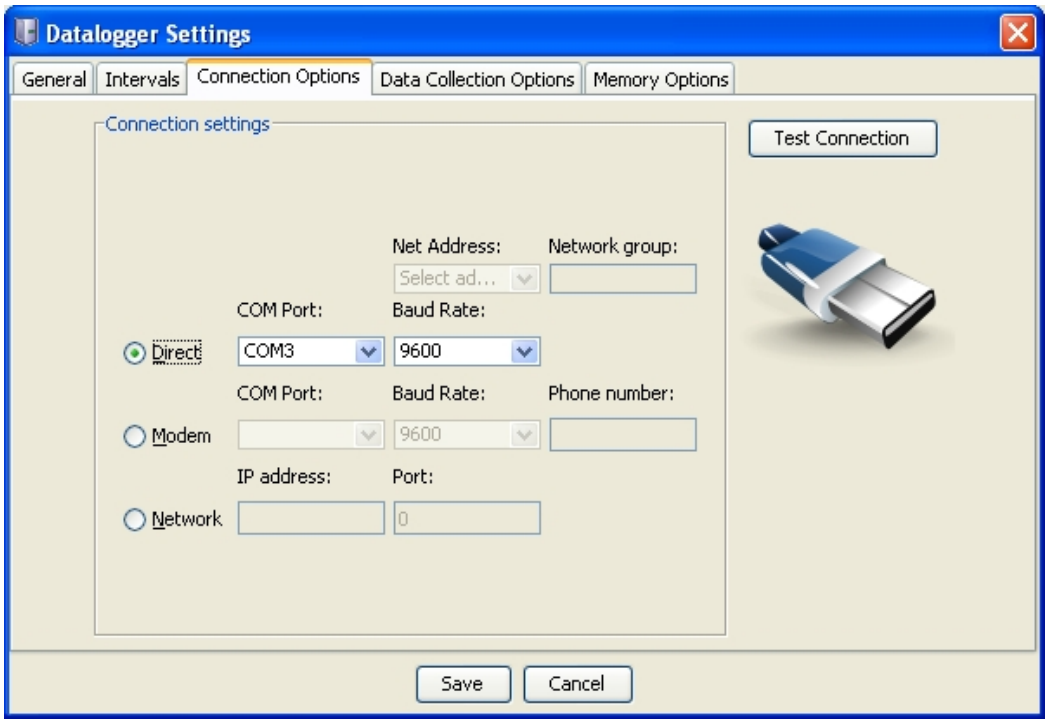

Figure 16 - Connection Options

3. Make sure the “Direct” radio button is enabled and select a COM port corresponding to the datalogger connection as determined in section 3.3. For LC-2 dataloggers, the proper “Baud Rate” setting will be 9600. When done, click the “Save” button.

4. Click on the “Open Connect” button from the toolbar to create a connection from LogView to the selected datalogger. After several seconds, LogView should respond with a “Connected” status in the lower left hand corner of the screen.

   NOTE: It’s very likely, when connecting for the first time to a new datalogger, that the following dialog box will be displayed (see Figure 17). This is normal and simply indicates that the Datalogger ID field that LogView assigns does not match the value in the physical datalogger. In most cases simply click on “Continue” to finish connecting to the datalogger.

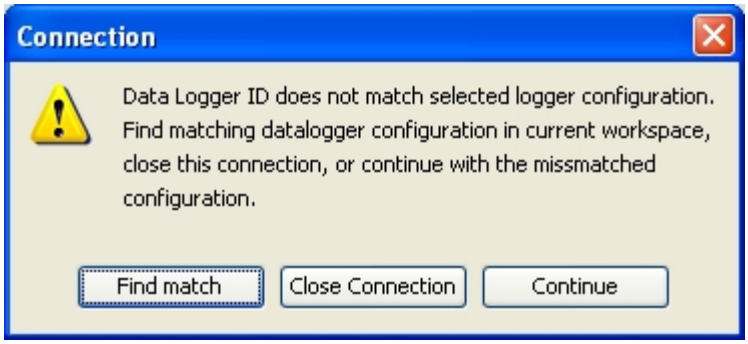

Figure 17 - Connection Warning Message

5. Upload the recently modified settings to the selected datalogger by clicking on the “Upload Settings” button from the toolbar.

6. Close the connection by clicking on the “Close Connect” button from the toolbar.

4. Creating a Datalogger Network (RS-485)

Under the project “ProjNetLoggers” is another type of project object: the Network Group object. A network group object contains all dataloggers that are to be “networked” together via an RS-485 communication link. As above, right-clicking a project object calls up a context menu, allowing a Network Group object to be added to the project.

Right-clicking a Network Group object calls up a context menu, allowing dataloggers to be added under the Network object.

Figure 18 below illustrates a typical datalogger “network”. In the Project Explorer, you can see that the "ProjNetLoggers" project is expanded and contains a Network group object called “RS485 Loggers”. Under “RS485 Loggers” are the networked dataloggers, "DL1” and “DL2”. Also notice that both dataloggers have sensors defined.

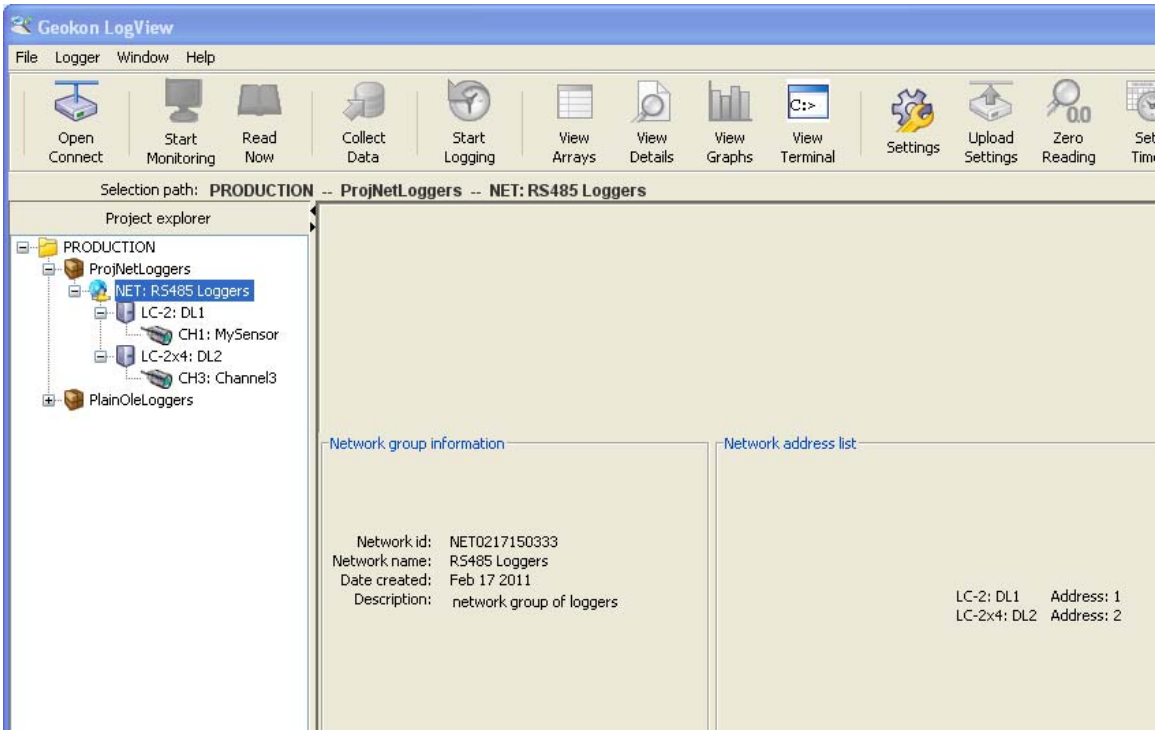

Figure 18 - Network Group

The sections below describe how to connect and communicate with networked dataloggers.

5. Connecting to Networked Dataloggers

A minimum of 6 components are required to create a network of (2) dataloggers:

Item	Description
1	8002-5: USB to RS-485 Conversion Module.
2	COM-109: USB cable needed communicate with item 1.
3	8002-1-3, 8002-4-3 or 8002-16-3: **Datalogger1** - One, four or sixteen channel datalogger with RS-485 option.
4	8002-1-3, 8002-4-3 or 8002-16-3: **Datalogger2** - One, four or sixteen channel datalogger with RS-485 option.
5	8002-1-3A: RS-485 Interconnect Cable. Connects item 1 with item 3.
6	8002-1-3A: RS-485 Interconnect Cable. Connects item 3 with item 4.

Table 1 – Minimum Components for RS-485 Logger Network

In LogView, after adding two Datalogger objects to the Network Group object, and before connecting the above components together as a network, each datalogger needs settings uploaded to it. This is accomplished using the following steps:

1) Connect one end of the COM-109 cable to the first datalogger's "Network In" connector and the other end to a free USB port on the PC. After selecting one of the networked Datalogger objects in the Project Explorer, click on the "Settings" button from the toolbar. The dialog box below will be displayed:

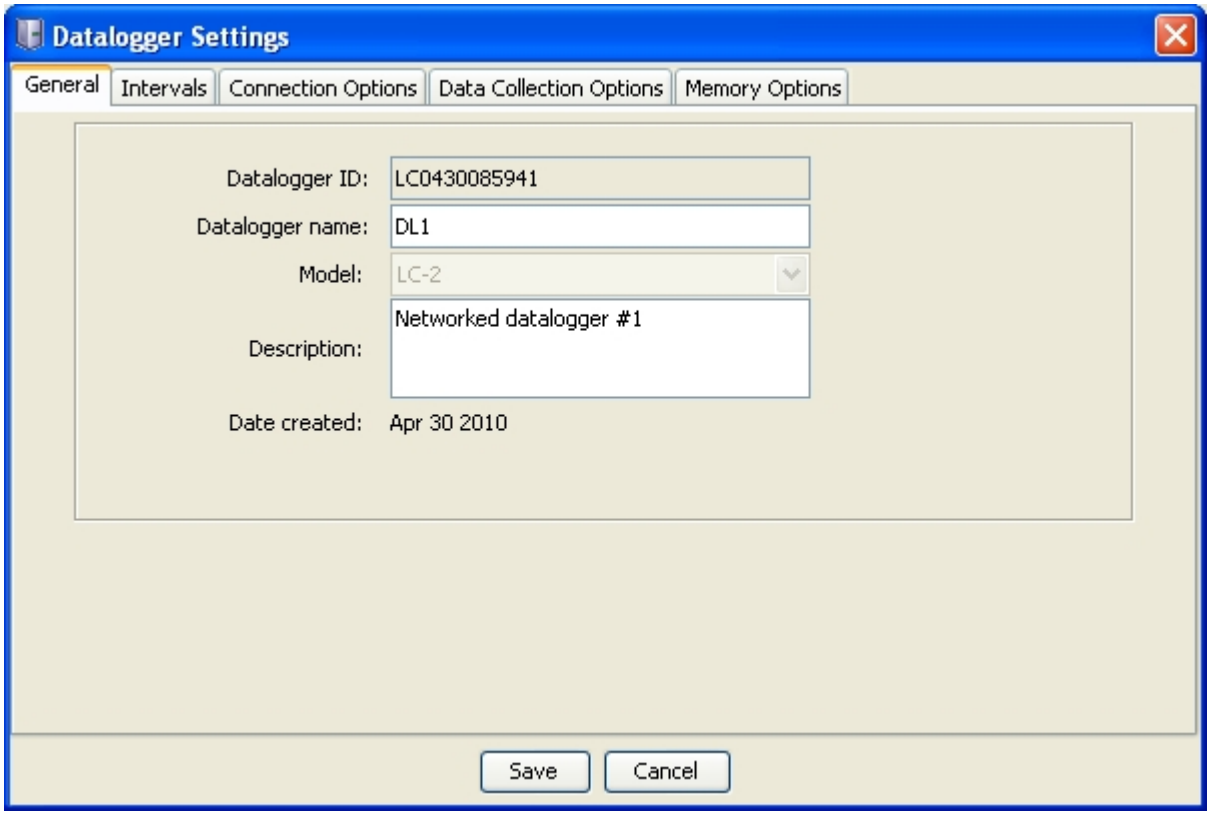

Figure 19 - Networked Datalogger Settings

2) Clicking on the “Connection Options” tab above will cause the dialog box below to be displayed:

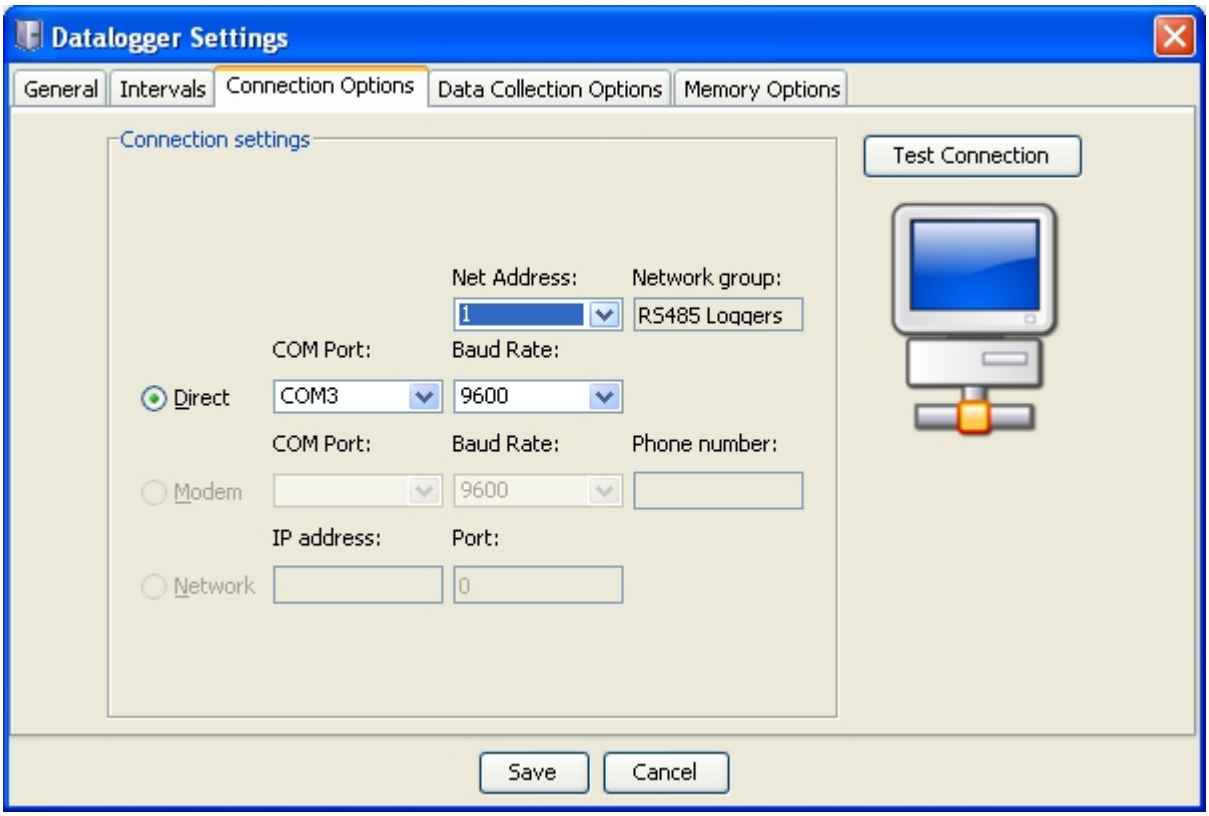

Figure 20 - Network Connection Option

3) Select a COM port corresponding to the datalogger connection - see section 2.3.10 (8002-4-3 and 8002-16-3) or 3.3.9 (8002-1-3) in the Geokon Datalogger Instruction Manual for more information on how to determine the appropriate COM port. Note that the network group for this datalogger has already been filled in.

4) The network address now needs to be set. Set the “Net Address” to the appropriate value; “1” for the first logger, “2” for the second, etc. It’s a good idea to label the datalogger and also name it in such a way that it is easy to remember which Datalogger object matches with which physical datalogger. When done click on the “Save” button.

5) Click on the “Open Connect” button from the toolbar to create a connection from LogView to the selected datalogger. After several seconds, LogView should respond with a “Connected” status in the lower left hand corner of the screen.

   NOTE: It’s very likely, when connecting for the first time to a new datalogger, that a warning dialog box will be displayed (see Figure 17). This is normal and simply indicates that the Datalogger ID field that LogView assigns does not match the value in the physical datalogger. In most cases simply click on “Continue” to finish connecting to the datalogger.

6) Upload the recently modified settings to the selected datalogger by clicking on the “Upload Settings” button from the toolbar.

7) Close the connection by clicking on the “Close Connect” button from the toolbar.

Now remove the COM-109 connection from the first data logger, attach it to the second and repeat steps 1 - 7 for next datalogger.

After the settings have been uploaded for all dataloggers in the network group, connect the components together as shown in the diagram below:

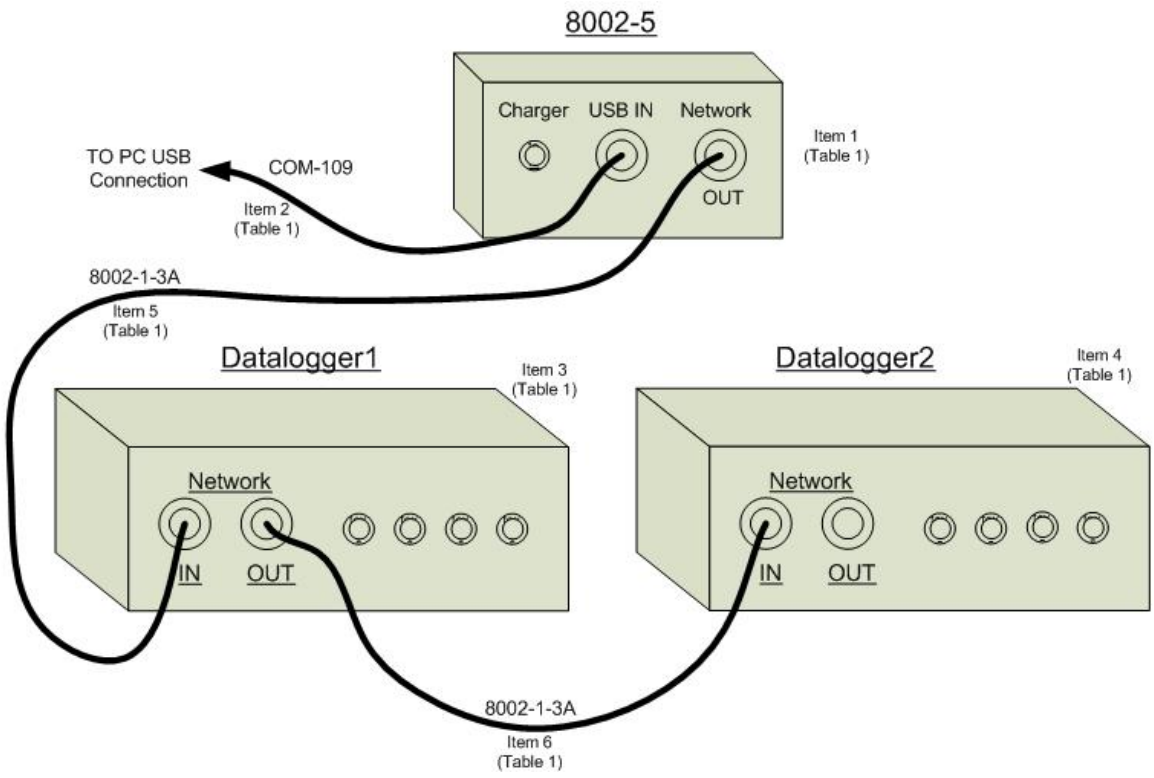

Figure 21 - Network Group Component Connections

The network group has now been setup and all attached dataloggers should be able to be accessed via LogView through the one USB connection.

NOTE: The last datalogger in the network must be terminated for proper operation. The termination procedure is described in the Datalogger Instruction Manual – Appendix F.

Appendix A – Updating LC-2 Firmware

This section describes how to download new firmware revisions to an LC-2 datalogger. The steps below describe the firmware update procedure:

A.1 Firmware Binary File:

Download the appropriate firmware for your particular logger from the Geokon download site: http://www.geokon.com/downloads/LC-2_Bootloader/LC2.htm

NOTE: The actual web page may differ slightly from the screen-shot below (figure 22)

Figure 22 - Logger Firmware Download Web Page

Select the firmware version for your datalogger by clicking on the appropriate link on the web-page above. This will start the file download process. The web browser will respond with a dialog box asking whether the file should be opened or saved – **always** select "Save" (see figure 23 below).

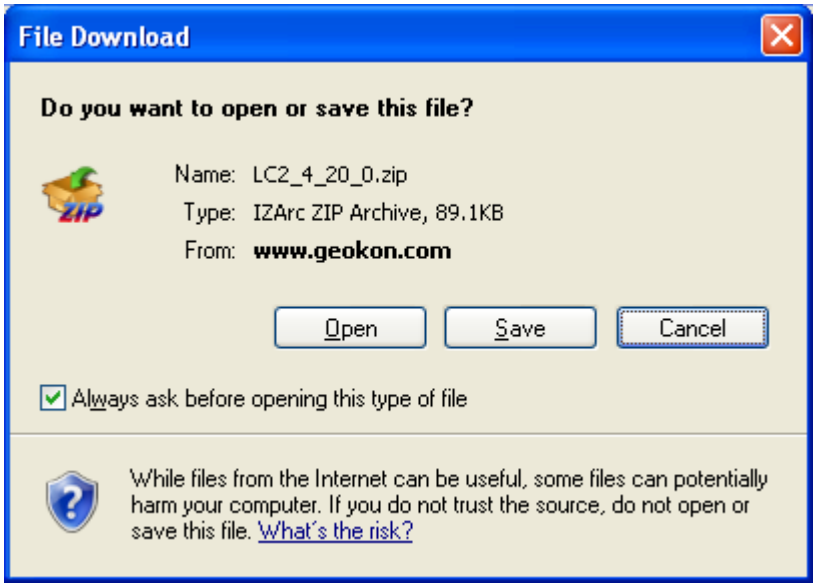

Figure 23 - File Download Dialog

After clicking on "Save" above, the browser will display another dialog to select a location where the firmware file will be saved. Select a convenient location that is easy to remember (like the "Desktop").

A.2 LogView Firmware Updater:

Launch LogView and open a connection to the datalogger that needs to be updated (see section 3 of this manual).

From the Logger menu, click on "Update firmware" to start the update process. (See figure 24 below)

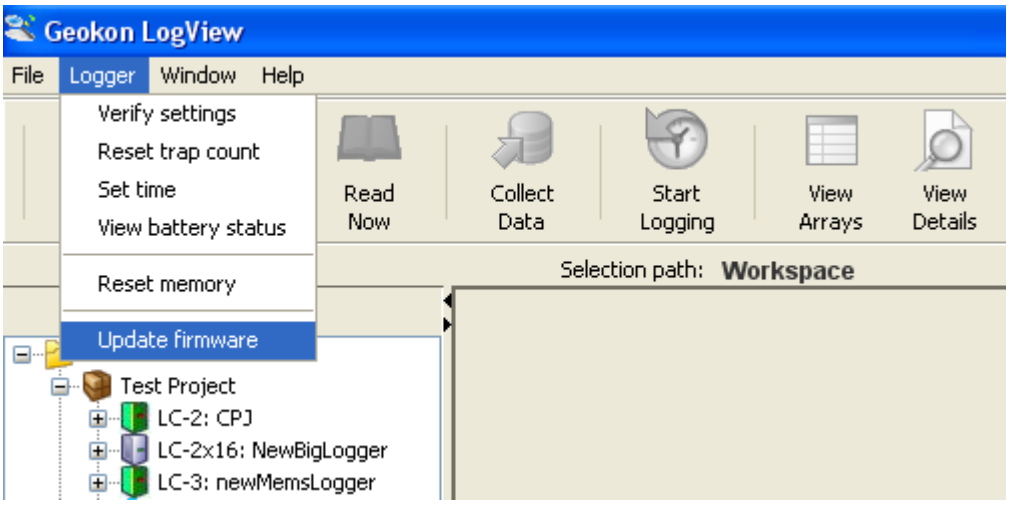

Figure 24 - Update Firmware Menu Selection

The first step of the firmware update process is to enter the full path and file name for the "zipped" firmware binary file downloaded in step A.1. You may enter it directly (see figure 25 below) or click on the "Browse" button to call up a File Selection Dialog (see figure 26).

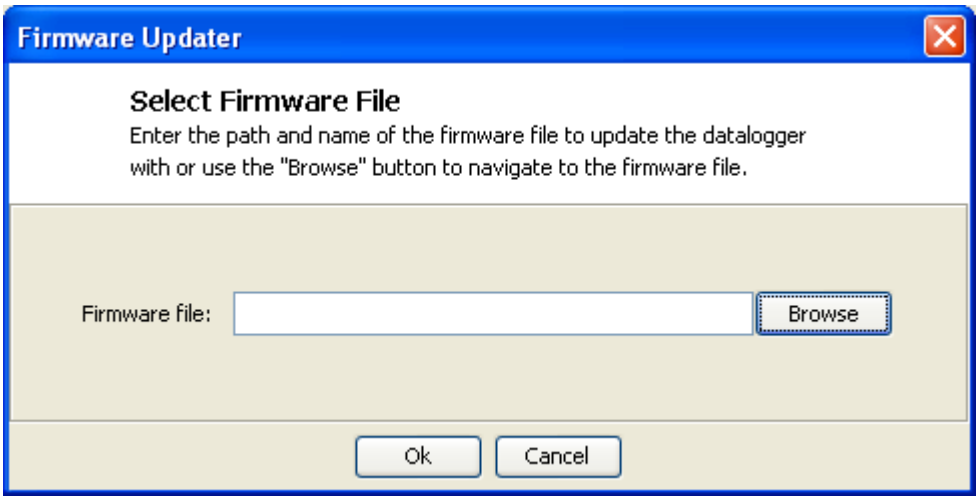

Figure 25 - Selecting the Firmware File

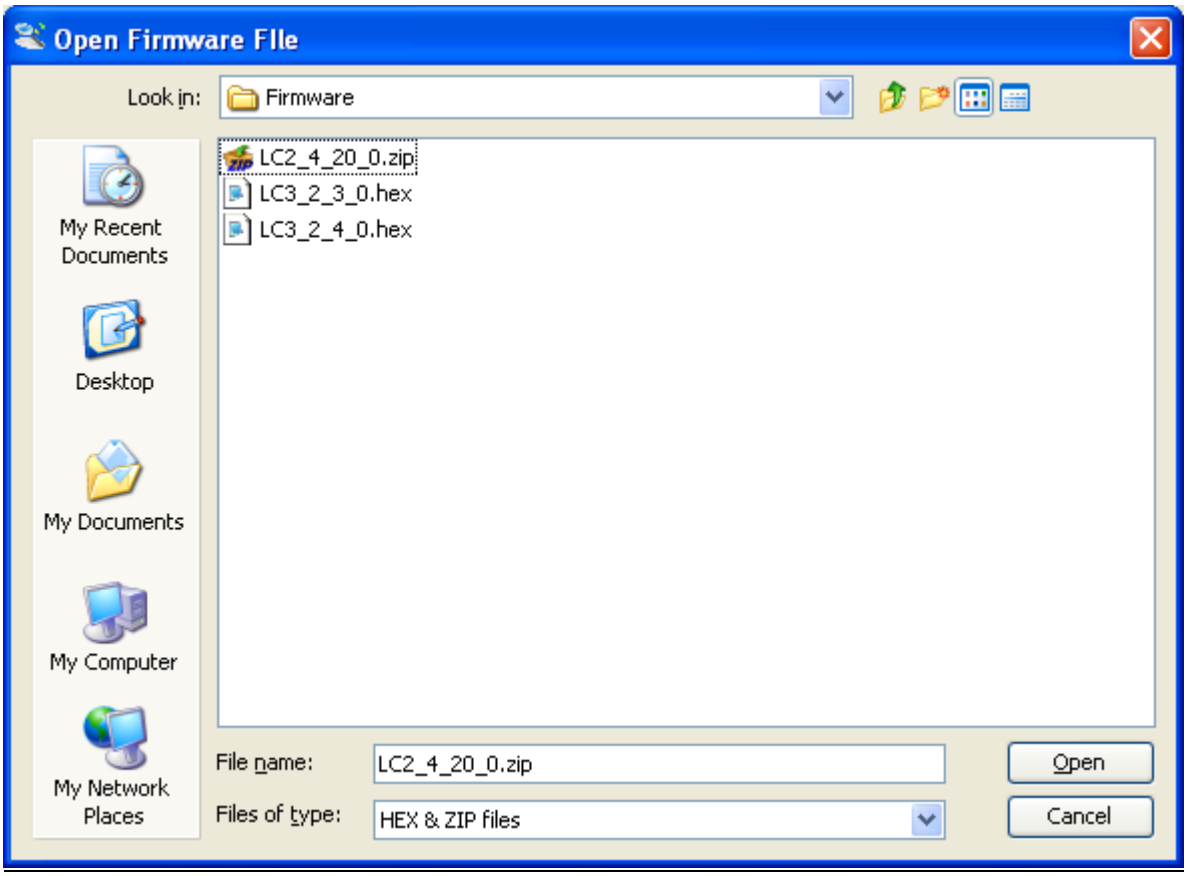

Figure 26 - Firmware File Selection Dialog

As can be seen in figure 26 above, valid file types are “Hex” and “Zip” files. Firmware files downloaded from Geokon’s web page are “Hex” files that have been compressed into a “Zip” file. LogView knows how to “unzip” these files (V2.0.0.0064 and greater) so they can be used directly without first decompressing them.

After entering the filename and path, click on “Ok” to start the firmware update process.

A.3 Finishing Up:

While the firmware is updating the progress bar (see figure 27 below) will be displayed. The firmware update will take several minutes.

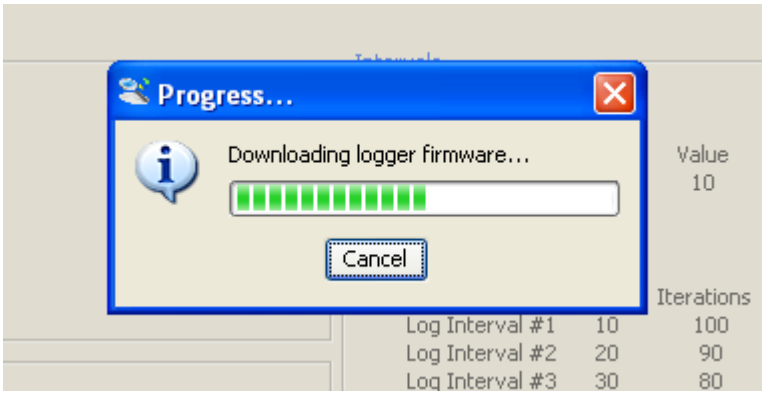

Figure 27 - Firmware Update Progress Bar

After the firmware update is complete, LogView will display the following dialog box (see figure 28 below).

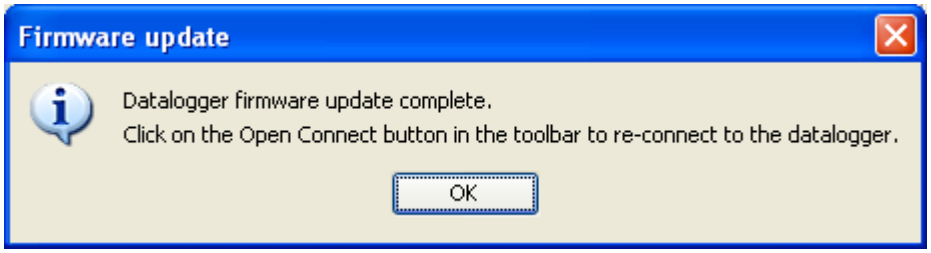

Figure 28 - Firmware Update Complete Dialog

The firmware update should now be complete. Click on OK and then click on the “Open Connect” button from the LogView toolbar to re-connect to the datalogger (see section 3 of this manual).