Medi-Kool (tm) USB Download Instructions

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Medi-Kool (tm) LOG Function

Once every minute, the Medi-Kool (tm) unit records: date, time, set temperature limit and measured temperature. This data is stored in a temporary volatile memory for up to 44 minutes, after the volatile memory is filled up with records, the data is written to a permanent non-volatile memory, also known as a FLASH memory. Each 44 minute segment of records is called an LOG entry.

Enough permanent FLASH memory is accommodated to keep 31 days of LOG data.

The unit will keep data in the temporary memory for up to 30 seconds after power is disconnected to the unit. After 30 seconds, the temporary memory is lost and the next LOG entry (max 44 minutes) in the FLASH memory will have non valid records.

The LOG data can be downloaded from the unit to a computer using a USB port located in the front of the control panel. For this, the operator needs to install an USB driver and use a terminal program or other download software compatible with the Kermit transfer protocol.

The downloaded LOG data will be stored on the computer as a CSV file and can be opened in a text editor or a spreadsheet application such as Excel.

Note, the downloaded data can be missing data records for up to 44 minutes, this due to the entry held in the temporary memory is not yet written to the FLASH memory. This temporary held entry will be available for download after it is stored in the FLASH memory.

USB Driver

To access the USB port on the Medi-Kool (tm) unit, a USB driver needs to be installed. For a Windows based system, the current driver is available for download here:

http://mmair.com/content/download/940/8518/file/CDM%202.04.06.exe

“Run” the program and allow it to install the necessary driver.

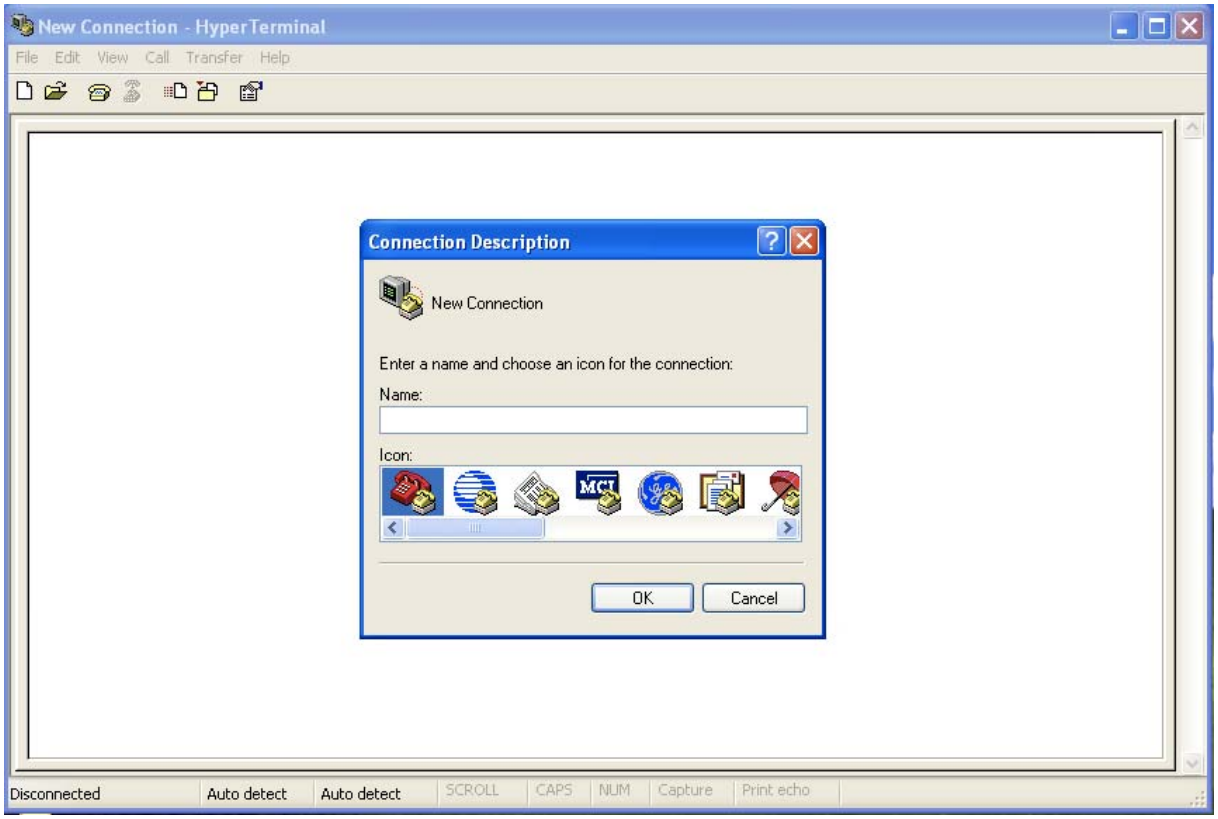
Installation guides are located here: http://www.ftdichip.com/Documents/InstallGuides.htm

After the driver is installed and the computer is connected to the Medi-Kool (tm) unit via an USB cable, the USB port acts like a serial COM port and a new port will appear in the Windows operating system.

USB Connection

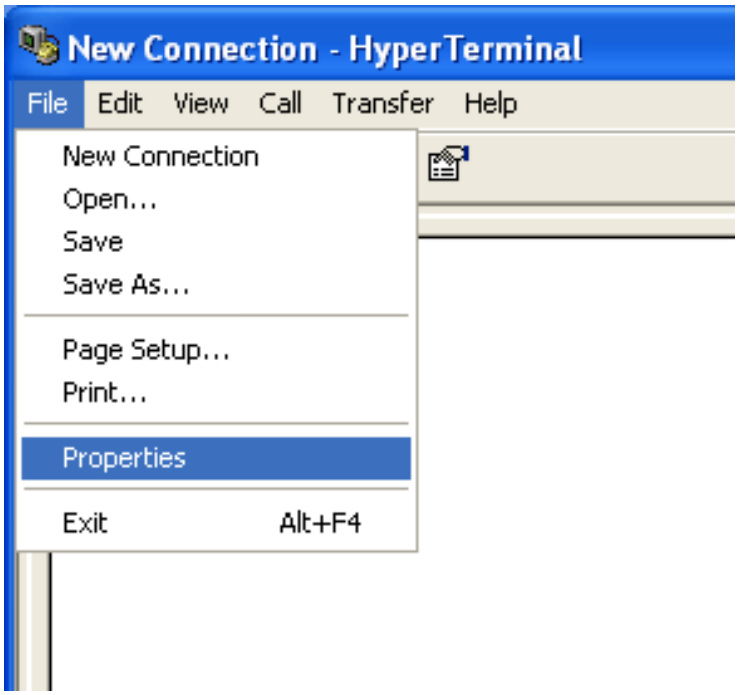
This document assumes that the operator of the unit will have a PC running Windows operating system.

Connect the computer to the Medi-Kool (tm) unit with a USB cable and open up Windows Hyper terminal located under Windows:
Start -> All Programs -> Accessories -> Communication -> HyperTerminal

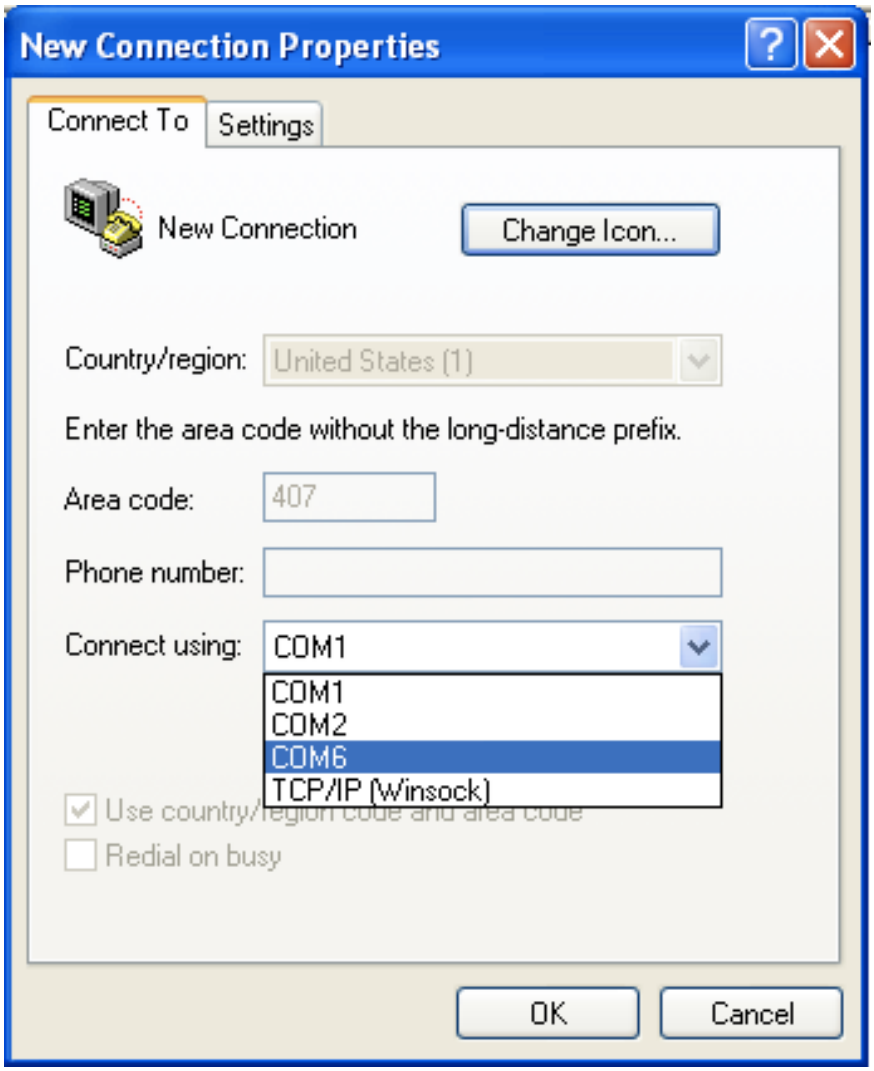


Click Cancel to exit the Connection Description or select a name for this Connection for future use and click OK.

To set-up the proper connection to be able to communicate with the Medi-Kool (tm) unit, select *File -> Properties* in the HyperTerminal menu.

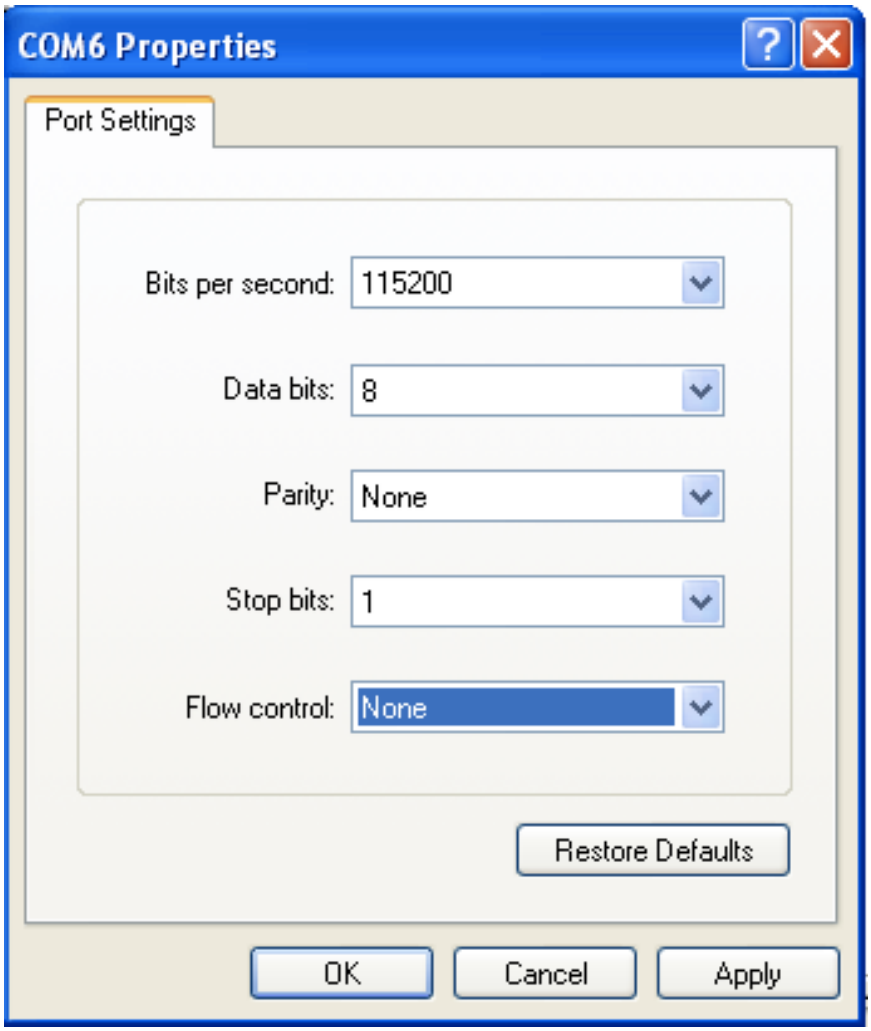


Select the COM port for the Medi-Kool (tm) unit. This will usually be a port named COM3 or higher.



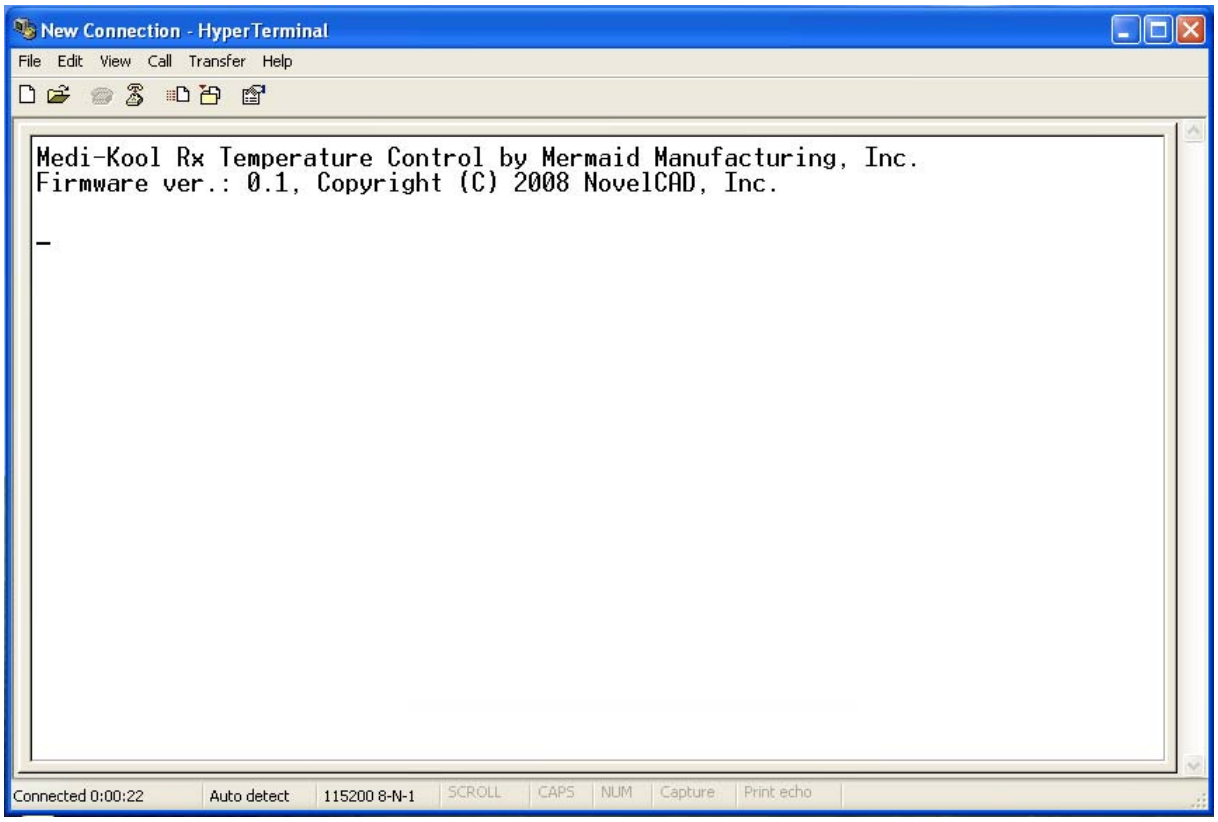
After the COM port is select click *Configure...* located right under the COM port field. Select the parameters as follows:

Bits per second: 115200
Data bits: 8
Parity: None
Stop bits: 1
Flow control: None



Click Apply and then OK.

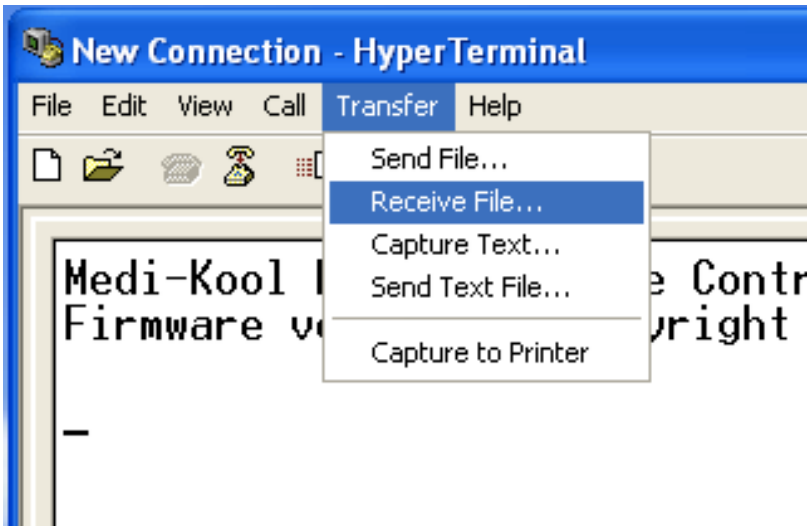
An empty terminal screen will be shown. To test the connection to the Medi-Kool (tm) unit, press the *Return* Key, a message should be printed in the terminal window if a successful connection was made.



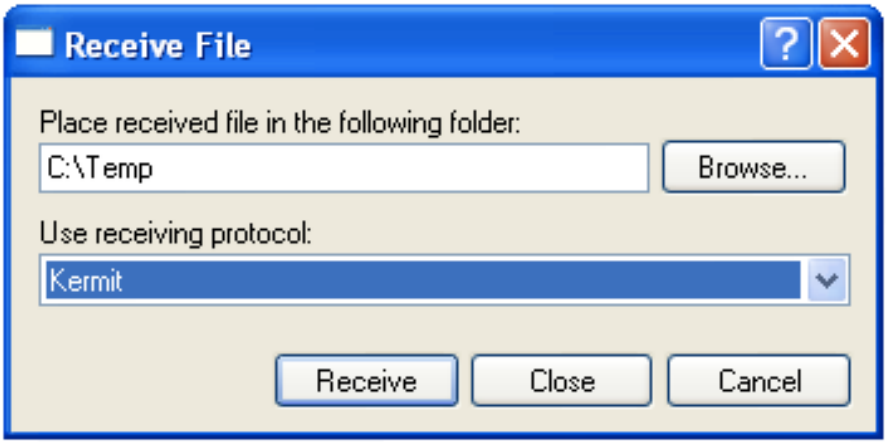
LOG Data Download

To download the LOG data from the Medi-Kool (tm) unit to the computer, in the Hyper Terminal menu select:

Transfer -> Receive File...



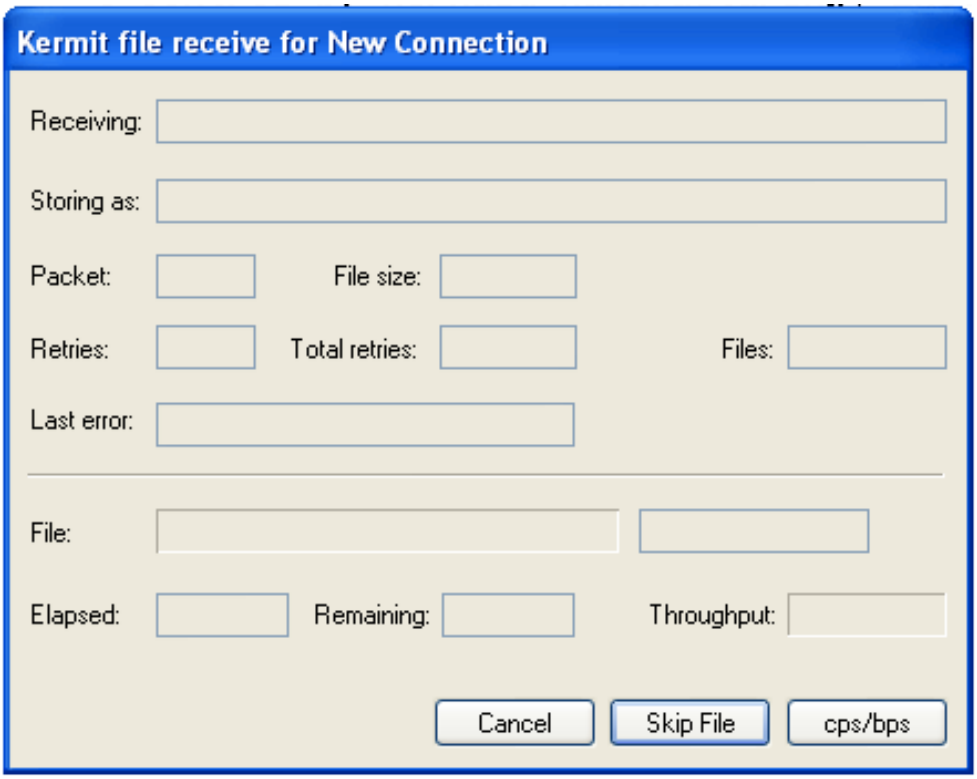
Select the directory where you want the downloaded LOG file to be stored and select Kermit as the receiving protocol to be used.



Press Receive to start receiving the LOG file on the computer. The software will now wait for the transfer of data from the Medi-Kool (tm) unit to begin.

On the Medi-Kool (tm) unit, enter the menu by pushing the navigation button once, if needed enter the code, then, by turning the navigation button in either direction select <- *Transmit LOG->* and press down the navigation button once more. This will start the transfer of the current LOG data stored in the unit to the computer.

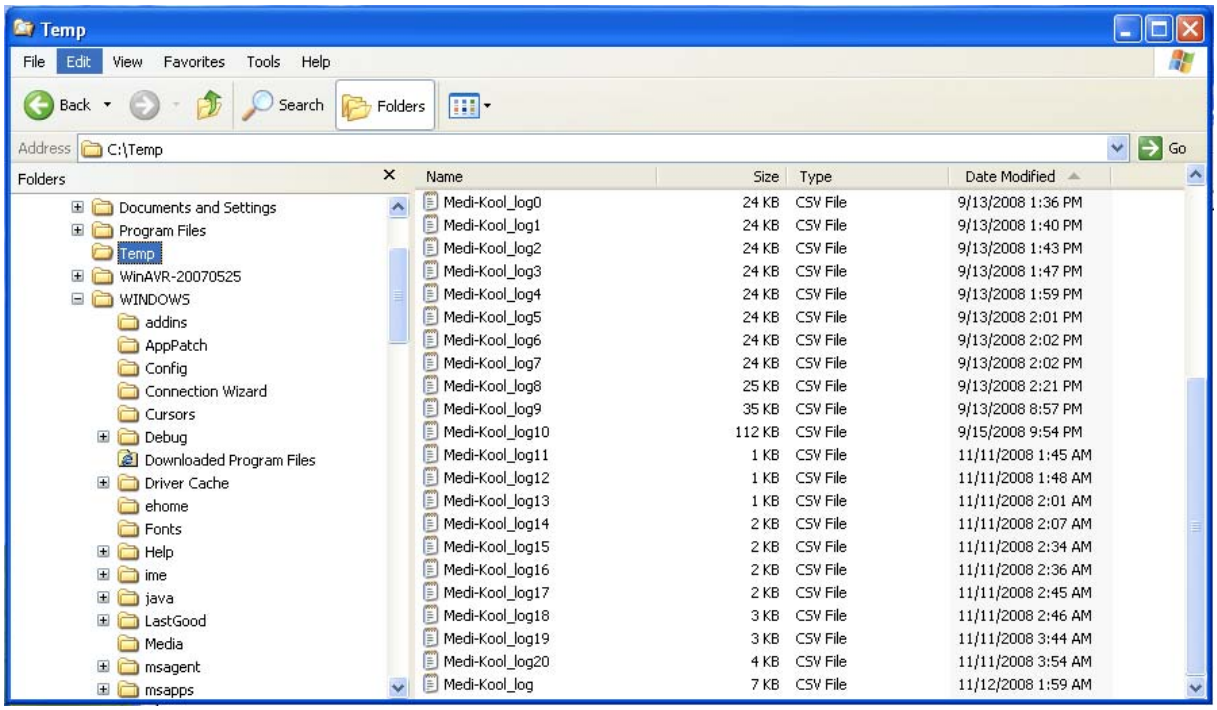
In the Hyper Terminal on the Windows computer a status window will be shown indicating the download progress.



LOG File

After the download is completed the LOG data file will show up in the directory selected during the transfer setup. The file will be named *Medi-Kool (tm)_log.csv*.

Any older LOG files stored in the same directory will be numbered as: *Medi-Kool (tm)_log#.csv*., where # is a number. The more recent the file was created, the higher the number.



The log file is stored in CSV (Comma Separated Values) format and can be viewed in a text editor or imported to applications like Excel.

The LOG file consists of four columns per row, each column is separated by commas. The first line in the file is a header and describes the fields. The column data fields in each row is constructed as:

```
date, time, set temperature limit, measured temperature
```

The format for the date is: *mm/dd/yy*, the time is in 24h format as: *hh:mm:ss*, and the temperature is shown in degree Fahrenheit.

```
Date,Time,Set Temp.,Meas. Temp.
09/12/08,19:53:00, 76, 81
09/12/08,19:54:00, 76, 81
09/12/08,19:55:00, 76, 81
09/12/08,19:56:00, 76, 81
09/12/08,19:57:00, 76, 80
09/12/08,19:58:00, 76, 80
09/12/08,19:59:00, 76, 80
09/12/08,20:00:00, 76, 79
09/12/08,20:01:00, 76, 79
09/12/08,20:02:00, 76, 79
09/12/08,20:03:00, 76, 79
09/12/08,20:04:00, 76, 78
09/12/08,20:05:00, 76, 78
09/12/08,20:06:00, 76, 78
09/12/08,20:07:00, 76, 78
09/12/08,20:08:00, 76, 78
09/12/08,20:09:00, 76, 78
09/12/08,20:10:00, 76, 77
09/12/08,20:11:00, 76, 77
09/12/08,20:12:00, 76, 78
09/12/08,20:13:00, 76, 79
09/12/08,20:14:00, 76, 79
09/12/08,20:15:00, 76, 80
09/12/08,20:16:00, 76, 81
09/12/08,20:17:00, 76, 81
09/12/08,20:18:00, 76, 81
09/12/08,20:19:00, 76, 81
09/12/08,20:20:00, 76, 81
09/12/08,20:21:00, 76, 81
09/12/08,20:22:00, 76, 82
09/12/08,20:23:00, 76, 82
09/12/08,20:24:00, 76, 80
09/12/08,20:25:00, 76, 80
09/12/08,20:26:00, 76, 79
09/12/08,20:27:00, 76, 79
09/12/08,20:28:00, 76, 79
09/12/08,20:29:00, 76, 79
09/12/08,20:30:00, 76, 78
09/12/08,20:31:00, 76, 79
09/12/08,20:32:00, 76, 79
09/12/08,20:33:00, 76, 78
09/12/08,20:34:00, 76, 78
09/12/08,20:35:00, 76, 78
09/12/08,20:36:00, 76, 78
...
```