

Downloading data from the Microtops II Sunphotometer: Guide to Windows Hyper Terminal

Version 1 (2005)

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The following guide provides information on how to create a connection to the Microtops II sun photometer using Windows Hyper Terminal, and also how to retrieve collected data.

Hyper Terminal is a communications software that was developed by Hilgraeve. It gives users the ability to connect and transfer files between two computers. **Note:** Windows Hyper Terminal is included as part of the operating system on Windows 95/ 98 /98 SE, Windows 2000, Windows XP, Windows ME and NT4. Its default location is:

Windows Start Bar – Programs – Accessories - Communications – Hyper Terminal.

If it is not available on your computer you can install the 'Hyper Terminal Private Edition' from the CD included with your loan, or you can download the latest edition from the Hilgraeve website at:

<http://www.hilgraeve.com/hpe/download.html>

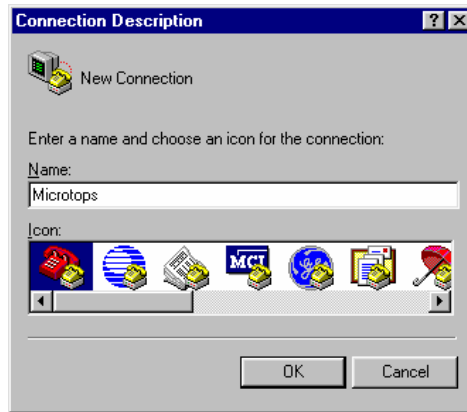
(click on either the FTP or HTTP link – the file is the same from each location, it is just the data transfer method that is different).

1. Installing Hyper Terminal

- a. Once you have downloaded the software, navigate to where the executable file is saved. The default location for the Hyper Terminal setup software on Windows XP is **c:/Program Files/Windows NT/Hyperterminal/HyperTrm.exe**. When you are installing the software you can select a more convenient location if you wish. To establish a Hyper Terminal connection click on the yellow telephone icon.

2. Creating a Hyper Terminal Connection

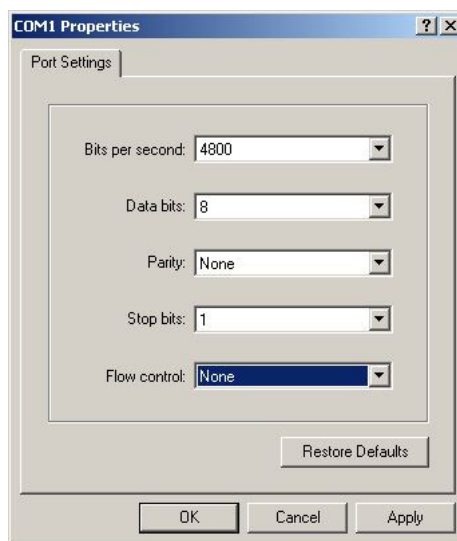
- a. When you open the Hyper Terminal setup software (using the yellow telephone icon) it will automatically take you through the process of setting up a new connection. You can create further connections from within the Hyper Terminal window by clicking on the file menu '**File - New Connection**'.
- b. After you have launched the software you will be asked for location details. You do not need to submit any as you will be using a com port for communication, not a modem or other network connection. Therefore, ignore any requests for location details by clicking '**cancel**' and then answering '**yes**' to the following Windows warning message. You may also have to repeat this process after step c.
- c. Type in a name for the connection (e.g. MicroTops).



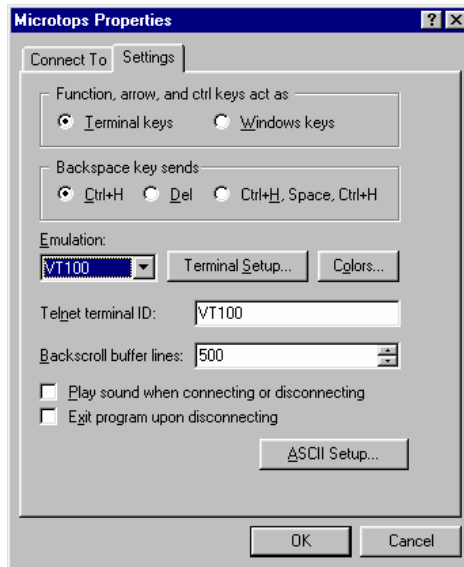
- d. In the 'Connect to' dialog box, select '**Direct to Com1**' (assuming that your available comport is Com1), otherwise select the appropriate comport.



- e. In the 'Com Properties' dialog box set 'Bits per second' to 4800 so it is the same as the baud rate on the Microtops.
- f. Set 'Data Bits' to 8.
- g. Set 'Parity' to None.
- h. Set 'Stop Bits' to 1.
- i. Set 'Flow control' to None.



- j. In the 'File' menu click '**Properties**'. When the Properties box appears go to the '**Settings**' tab. Under Emulation select VT100. Click '**OK**'.

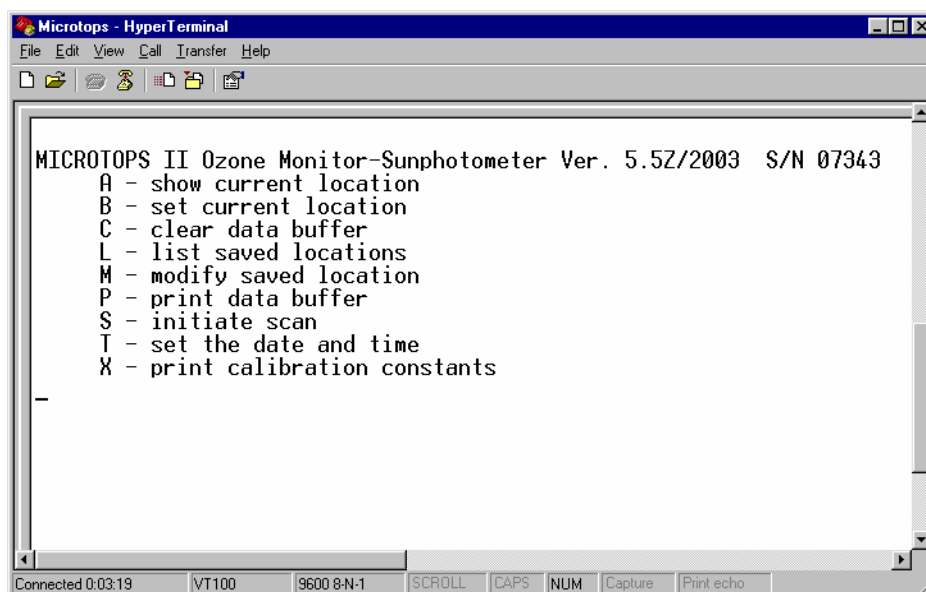


- k. Under '**File**' menu select '**Save As**' and save the configuration file to a convenient folder. The file will be given a '.ht' tag. You will need to access this file when you come to download the data from your Microtops.

Hyper terminal should now be ready to receive data from the Microtops instrument.

2. Retrieving data from the Microtops

- a. Connect your Microtops to an available serial port on the back of your PC with the cable supplied with your instrument.
- b. Open the configuration file (*.ht) for the Microtops that you have just created. The default location is **Windows Start Bar – Programs – Accessories – Communications – Hyper Terminal**. If it asks if you want to install a modem before you make a connection, select '**No**'.
- c. Once the HyperTerminal screen opens turn the Microtops on. After the Microtops has completed initialisation press the '**Return**' key on the computer keyboard. The following screen should be displayed.



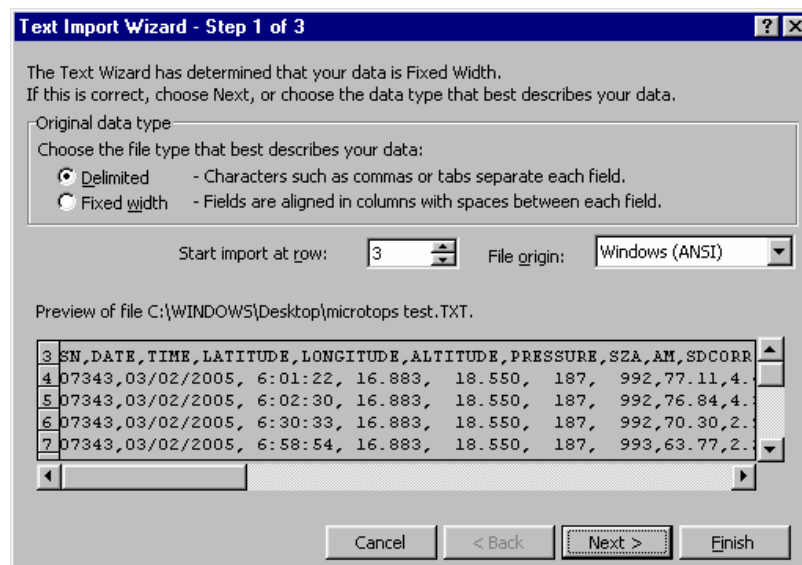
If nothing happens when you hit the 'return' key, check that the baud rate on the Microtops is set to 4800. You can do this by pressing the 'menu' button, pressing the 'up arrow' once, and 'baud rate' will be displayed in the LCD window. Press 'enter' followed by the left or right arrow, depending on whether you need to increase or decrease the baud rate. Press 'enter' again to affect the changes, followed by the 'escape' button.

- d. To download the data from the Microtops:-
 - i. From the menu bar in the Hyper Terminal window, click on **'Transfer' – 'Capture Text'**
 - ii. When asked where to save the file, browse to somewhere you can easily find the data and give it a meaningful file name, then click **'Start'**.
 - iii. Now press **'p'** on the keyboard. The data from the Microtops should stream in the HyperTerminal window.
 - iv. When HyperTerminal has finished printing your data to screen and file, it will print 'END' at the bottom of the screen.
 - v. When it shows END. click on **'Transfer' – 'Capture Text' – 'Stop'**
 - vi. Close the Hyper Terminal window.

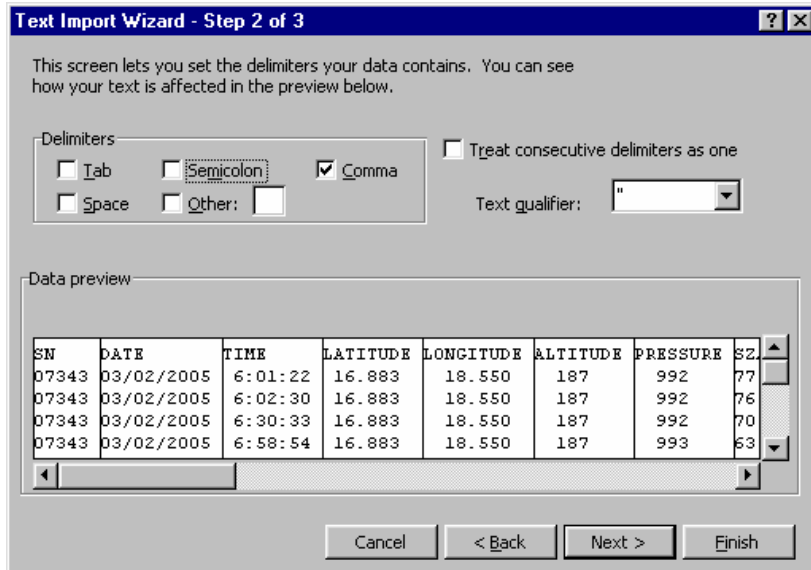
Note:

Please contact FSF staff if you require to recovery deleted or cleared data from the sun photometer data buffer.

- e. Now open Microsoft Excel.
- f. In Excel:-
 - i. Click **'File' – 'Open'**.
 - ii. Navigate to where your Microtops data file is saved (the one you created in section 2d-ii), and **'Open'** it.
 - iii. In the Text Import Wizard under 'Original data type' select **'Delimited'**, under 'Start import at row' choose **'3'** and under 'File origin' as **'Windows (ANSI)'**. Then select **'Next'**.



- iv. Now within 'Delimiters' select **'Comma'** and 'Text qualifier' as **'\"'** and then click **'Finish'**.



- g. Now in Excel:-
Save your data as an **.xls workbook** with an appropriate file name and location.