Uploading results from Victoria to a PC

The use of the laptop PC as a standard tool to centralize reports of any kind is widespread. This fact forces to make easy the data transmission from any information source to it in the Test & Measurement field. This way, the application of printing results to a file arises as a very usual procedure to complement the measurement itself

Application Note navasdhtopc21e

The most complete test & measurement portfolio

TrendCommunications

Measurement results can be printed out for inclusion in reports, which is done by connecting the instrument to a printer, usually by means of a serial connection. Nonetheless, it is more practical to have a fast and simple means of transferring this information directly from the measurement device to the word processors and spreadsheets that we typically use. In this case, the connection between the instrument and the printer is replaced by a connection between the instrument and a PC. The Victoria range of instruments include a serial communications port with an RS232C interface through which such a connection can be made.

CONNECTING VICTORIA TO THE PC

There are two requirements for setting up a serial connection between the Victoria and a PC. These are as follows:

- Hardware: the right cable
- Software: a communications program

A null modem is needed for connecting the serial port of the Victoria to a free serial port on the PC (typically COM1 or COM2). The null modem interconnects data transmission signals and data reception signals in both directions and both masses (GND) at their minimum configuration, supplying flow control through software communication (XON-XOFF). COM connectors usually have 9 contacts, which means that the connections are: contact 3 with 2, 2 with 3 and 5 with 5.

As far as software is concerned, *Windows*[1] environments always include a communications program (*Terminal* or *Hyperterminal*) that allows the parameters to be set up for serial connections and for these connections to be established. The details of how this program should be programmed are described below.

Once the hardware and software requirements have been met, there are two alternative ways of transferring information from the Victoria to the PC. These alternatives simply differ in the way the data is presented. Basically, the information is transferred as a text file. If the text is separated by commas, it can be presented directly in a spreadsheet that accepts this format. If the text is not separated by commas, it cannot be treated in such a neat and tidy fashion; but, on the other hand, no spreadsheet is needed, with a simple word processor being enough to work with the file.

1. *Terminal, Hyperterminal and Windows are registered trademarks in the United States and other countries, and are the property of Microsoft Corporation.*

UPLOADING A TEXT FILE

In this first case, the transfer is carried out directly from the measurement device to the window of the Hyperterminal program. Once it appears in this window, the text can be copied and pasted into whichever word processor you choose.

Programming Victoria

All the parameters that need to be programmed for the serial communication can be found on the screen labelled *Tools*. One correct combination of parameters (although not the only one) can be seen in Figure 1:

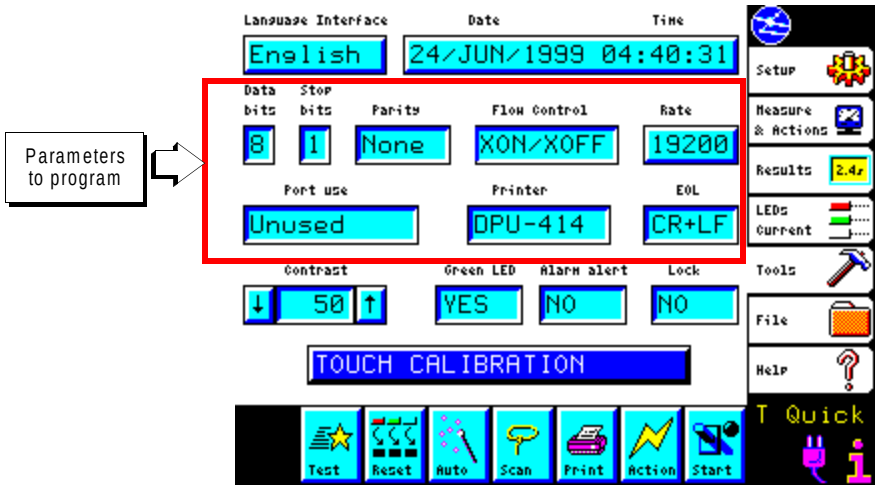

Figure 1 Screen showing the programming of parameters for serial communication

Programming Hyperterminal

1. Open *Hyperterminal*
2. When asked if you wish to install a modem, choose NO
3. File-New connection: give a name to the connection (any name you like) and press OK
4. Connect using “Direct to Com” by selecting the serial port to which the null modem has been connected
5. COM properties: the same as those of the serial port of the Victoria (8, 1 , No, XON/XOFF, etc...)

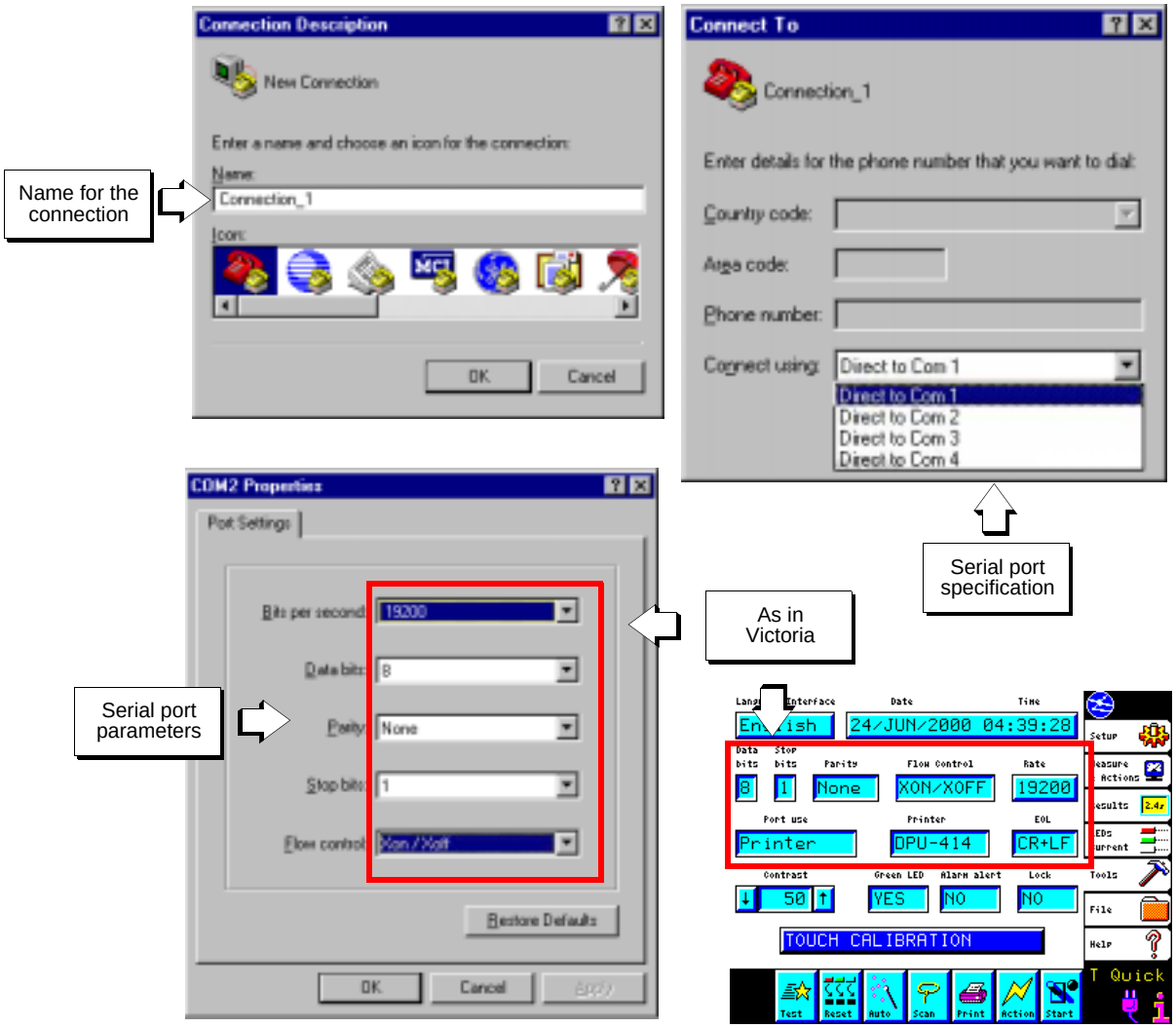

Figure 2 Programming Hyperterminal

Uploading data to a PC

When each measurement is completed, a results file is automatically generated. By default, these files are identified by time and date, although they can also be given a name that can be edited by the user. In addition, Victoria also allows for the inclusion of comments in order to make it easier to identify each file.

Select the measurement from the list of files and it will be loaded onto the screen of the Victoria. Once the measurement has been loaded, it

can then be printed out in line with the type of printout desired from within the wide range of possibilities offered by the instrument.

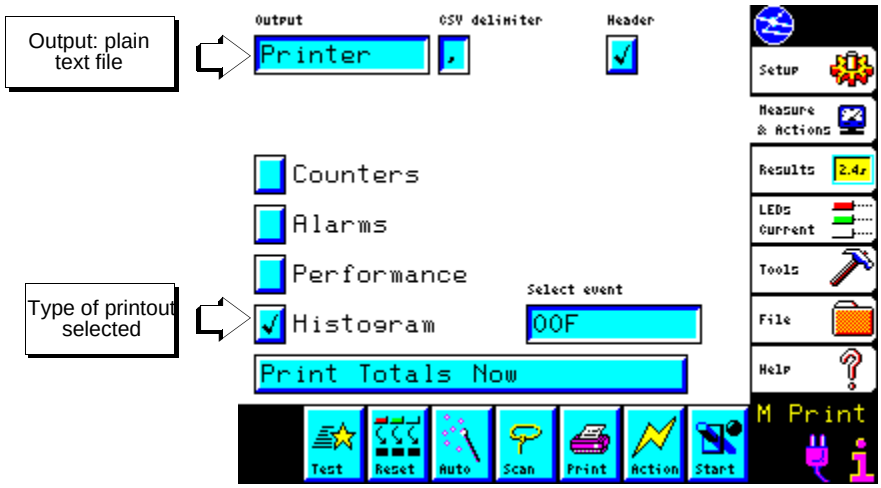

Figure 3 — *Selecting output type (for a plain text file select "Printer") and printout type (in the example, "Histogram" for MS-AIS).*

With the instrument connected to the PC, when the button *Print totals now* is pressed, the printout selected will appear on the screen of the program *Hyperterminal*. Another type of printout can be selected and the operation repeated.

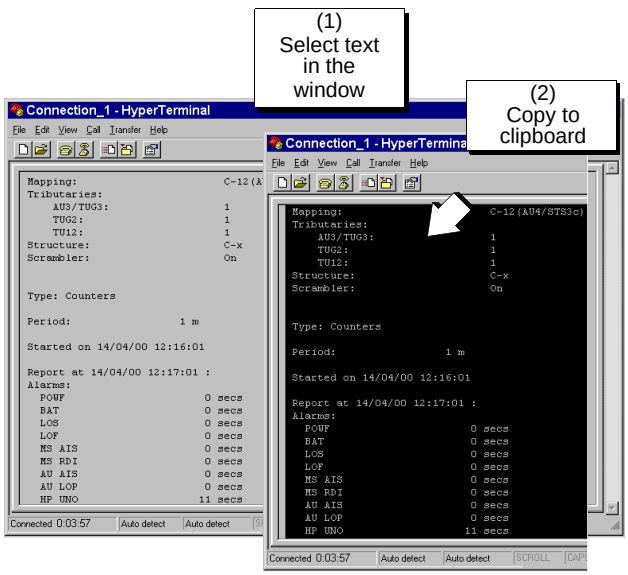

Figure 4 — *Hyperterminal window: selecting text to be copied to word processor*

Receiving the data

1. With the printout on screen, from the menu *Edit* choose the option *Select all* and then *Copy* (see Figure 4)
2. Open the word processor (for example *Word*[2]) and paste the contents of the clipboard
3. Select all and choose the font type *Courier*; which ensures that the text is correctly aligned in columns (if this type of font has already been used in *Hyperterminal*, this step is not necessary).

UPLOADING A COMMA SEPARATED VALUES FILE (CSV)

The Comma Separated Values (CSV) file format lets the file transferred be opened using a spreadsheet that accepts this type of file (for example Excel[3]). The information contained in the text will then appear automatically aligned in columns. Although the separating character is usually a comma, it can also be a semi-colon. In any case, this must be indicated both in the program generating the text file (Victoria) and the program that receives it (the spreadsheet) if the file is to be correctly interpreted. Programming the communications parameters, both in Victoria and in the Hyperterminal application, is carried out in exactly the same way as described for plain text files. Differences appear when programming the type of output in Victoria, as will be seen in the sections below.

Programming Victoria

The stage where Victoria is programmed (figure 3) is similar, except for the option in the field *Output*, which is now not *Printer* but *CSV*. Next, the type of separator must be chosen, comma (,) or semi-colon (;), in the field *CSV separator*. As in the previous case, it is possible to activate the printing of an informative header by marking the checkbox *Header*. The rest of the programming referring to the choice of the measurement file to be printed and the type of printout is the same as in the previous case.

2. *Word is a registered trademark in the United States and other countries, and is the property of Microsoft Corporation.*
3. *Excel is a registered trademark in the United States and other countries, and is the property of Microsoft Corporation.*

Programming Hyperterminal to receive data

In the menu *Transfer*, select the option *Capture Text*. Indicate where the text file received is to be stored with the name of the file at the end (the full path).

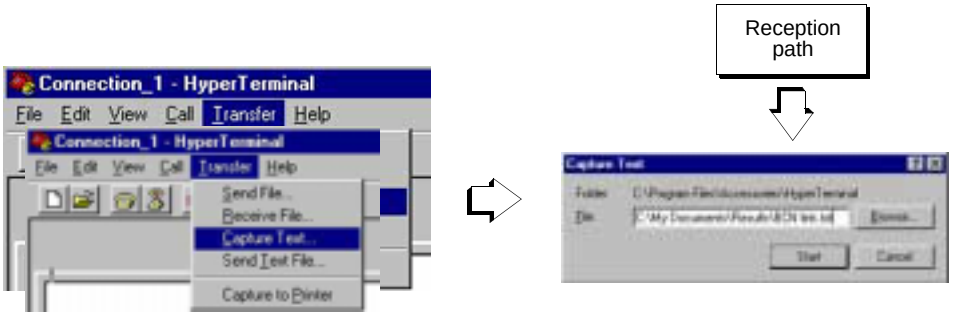

Figure 5 *Indication of folder in which information transferred is to be stored (file Capture.txt)*

In the screen of figure 3, push *Print Totals Now*. In the window of Hyperterminal, the text corresponding to the printout will be seen. Wait until the transfer is finished.

In the menu *Transfer*, option *Capture Text*, a list opens to the right. In this list select *Stop*.

Figure 6 *Stopping the action of capture CSV text.*

The Microsoft Excel program

Once the data have been received, it have to be displayed through a spreadsheet. In this example we describe the procedure to work with Microsoft *Excel*.

1. Menu *File*, option *Open*: select type of file (txt, csv,...)
2. In this dialog box, select the text file received

3. Push the button *Open*
4. Select the radiobutton *Separated*
5. Push the button *Next*
6. Select the *CSV* separator previously chosen (comma or semi-colon)
7. Push the button *Next*
8. Select the radiobutton *General*
9. Push the button *Finish*
10. The printout will then be opened as an Excel spreadsheet ordered in columns ❒

TrendCommunications

Trend Communications SL
Pujades, 60
08005 Barcelona (Spain)
www.trendcomms.com
infoline@trendcomms.com

Trend Communications Ltd
Knaves Beech Estate
Loudwater, High Wycombe
Buckinghamshire HP10 9QZ UK

International: .... +44 1628 524977
España:..... 93 300 3313
UK:..... 01628 524977
Deutschland: 089 32 30 09 11

Italia: 02 73 91 414
France: 01 69 35 54 70
India:..... 22 8597 463/4
US: 256 461 0790