Index

Overview

Quick start

Y-axis scale box

Options button

Run and stop buttons

Automatic mode

Back on Top

On screen measurement

More on modems

What the numbers mean ?

How to register

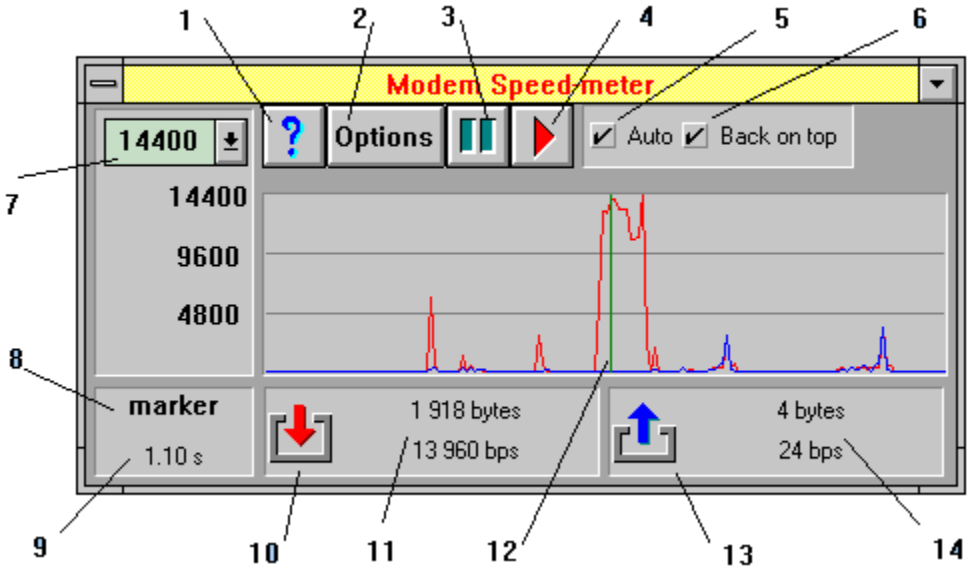
Overview

This is the version 2.0 of **Modem Speed-meter,** a Windows™ 3.1 utility program that monitors your modem.

The **Modem Speed-meter** window mainly displays graphically your **modem speed** while you are connected. It truly displays how many bytes are received and transmitted per unit of time. The graphic is constantly updated so that the user can see how his or her modem is really working.

The average modem speed can also been measured by probing two points in the graphic window.

Modem Speed-meter requires Microsoft® Windows™ 3.1 or 3.11.
Windows 95 is not supported by **Modem Speed-meter**. If you are using a Windows 3.1 communication program with Windows 95, chances are that **Modem Speed-meter** may work. If so this is because Windows 95 is smart enough to emulate the Windows 3.1 communication functions. If it work for you I will be happy but this mode is not supported.



(1) The help button

(2) The options button give access to a configuration window where you specify the modem COM port, the X axis step size and the sampling interval.

(3) The stop button is to stop reporting the modem activity.

(4) The run button is to start reporting the modem activity. When **Modem Speed-meter** is running, the run button blinks.

(5) When checked, the automatic mode allows to start and stop reporting the modem activities when your communication software open and close the COM port.

(6) When checked, the back on Top mode allows **Modem Speed-meter** to try to come back on top of others windows every 7 or 8 seconds.

(7) The Y-axis scale box is where you choose the scaling of the vertical axis.

(8) Here **marker** means that every numeric values displayed in the bottom area of the **Modem Speed-meter** window are related to the green marker position. When two markers are present in the graphic area, the displayed word in (8) is measure. If there is nothing in (8), the numbers displayed all relates to the last (the leftmost) sample of data.

(9) The elapsed time. If (8) displays **marker** this is the elapsed time at the marker position. If (8) display is

measure it is the elapsed time between, and including, the two marker positions.

(10) This symbol identifies this area as related to the data received by the modem from the phone line.

(11) Here is shown the number of bytes received in the elapsed time shown in (9). The corresponding averaged modem speed is shown in bit per seconds.

(12) Up to two markers can be positioned in the graphic area for accurate measurement.

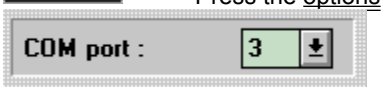
(13) This symbol identifies this area as related to the data sent by the modem over the phone line.

(14) Here is shown the number of bytes sent in the elapsed time shown in (9). The corresponding averaged modem speed is shown in bit per seconds.

There is many reasons why even a fast modem may transfer a low number of bytes per second. **Modem Speed-meter** can help you to understand some of these. To tell the truth, there is even some moments where your modem could fly at higher speed than its rated specifications (ever heard about data compression data compression...).
Modem Speed-meter can show you these too rare events !
Modem Speed-meter is a **shareware**. You are welcome to try it out for **21 days**. If you continue to use it past the trial period, you must register. The unregistered version of **Modem Speed-meter** is limited to 5 minutes per session.

Quick start

Press the options button



Choose the appropriate COM port

Press the start button

When running, the currently selected COM port is displayed in the window title and the start button gently blinks.

Y scale

The Y-axis scale of the graphic display can be changed at any time. The selection box initially contains 10 standardized modem speed values between 1200 bps (bytes per second) and 57600 bps.

The 10 choices can be customized by manually editing the MODMMETR.INI file. This file is located in the **Modem Speed-meter** installation directory. The 10 entries are under the section **[Y scale values]**. Allowed values must be integers between 0 and 65535. The semi-colon **;** can be used to comment out a line of text. If **Modem Speed-meter** does not find an entry it will use its own default value.

The default values :

…
[Y scale values]
Y0=57600
Y1=38400
Y2=33600
Y3=28800
Y4=19200
Y5=14400
Y6=9600
Y7=4800
Y8=2400
Y9=1200

If you think you screwed something up in the MODMMETR.INI file and if you need to come back to the default setting, all what you have to do is to delete the MODMMETR.INI file and start and exit **Modem Speed-meter**. This is enough to create the default MODMMETR.INI file. If you are a registered user, your registration code is stored in your WIN.INI file so you do not loose it when you reset the MODMMETR.INI file.

There is many reasons why your modem would crawl instead of flying thru the Web. Want to see some of the reasons ?.

Also you may want to have a look to the definition section. It is quite a boring section but it may help you to pose as a genuine modem expert (plus I spent some time to write it so I would appreciate if you read it).

Option window

The option setup window allows to select :

The COM port to monitor. Choices are 1 to 4.

The sampling interval. The sampling interval sampling is the interval of time at which the graphic window is updated (and therefore the interval of time at which the modem speed is re-evaluated).

The step size. The step size is the number of pixels between each data point along the X-axis in the graphic window.

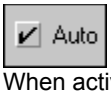
The register window.

When your copy of **Modem Speed-meter** is registered, your name appears in the option window and you are not bothered any more by the 5 mn limit of the unregistered version.

Run and Stop buttons

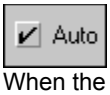
The **run** button and the **stop** button looks like standard tape recorder buttons. When running, the run button blinks.

Automatic mode



When activated, the automatic mode allows to start and stop automatically to watch the activities of a COM port. **Modem Speed-meter** starts to report when the COM port is *opened* and stops when the COM port is *closed*. Practically, *opening a COM port* means that a Windows application takes the phone line and dial. *Closing a COM port* means that the Windows application is hanging up the phone.

Back on Top



When the **Back on top** checkbox is checked and **Modem Speed-meter** is running, it tries to promote its own window on top of any other windows aproximately every 7 or 8 seconds. This feature allows to run his or her communication software on the full screen with an eye on **Modem Speed-meter**. It also gives the user a chance to access an area of the screen that would be always covered otherwise.

Sampling interval

The sampling interval is the interval of time between two graphic display update. The value you choose is not exactly what you get because of the way Windows works. However **Modem Speed-meter** displays and uses the exact elapsed time interval in its calculations.

During each sampling interval, **Modem Speed-meter** counts every byte received or transmitted. When the graphic display is updated, the numbers are displayed along with the resulting modem speed.

It is therefore important to understand that the displayed modem speed is a value averaged during the sampling interval. See examples and definitions for more details.

Data Connect Equipment : **the modem**

Data Terminal Equipment : **the computer**

What the numbers mean ?

baud or bps ?

The baud is how often the sound changes on the phone line. If your modem would use only two sounds: one for transmitting 0s and the other to transmit 1s, the modem speed in baud and in **bps** (bytes per second) would be the same. Modern modems use many sounds and transmit more than one bit per sound.

Some commonly implemented standards *(as of january 1996)*

V.21	300 bps
V.23	75/1200 bps (French Minitel, Videotext services)
V.22	1200 bps with fall back to 600 bps
V.22 bis	2400 bps with fall back to 1200 bps
V.32	9600 bps with fall back to 4800 bps
V.32 bis	14400 bps with fall back to 12000 bps, 9600 bps, 7200 bps and 4800 bps
V.32 terbo	19200 bps with fall back to 16800 bps and V.32bis
V.34	28800 bps fall back to V.32terbo

FAX standards

V.27ter	4800 bps with fall back to 2400 bps
V.29	9600 bps with fall back to 7200 bps and 4800 bps
V.17	14400 bps with fall back to 12000 bps, 9600 bps and 7200 bps
V.34	28800 bps

All the above numbers relates to the modem to modem transmission speed (also called DCE speed). When the modem is **compressing** the data, there is more data transmitted between the modem and the computer than between the two connected modems.

If your modem is using a data compression protocol (like V.42bis, MNP5, MNP7 or MNP9) chances are that the modem speed as seen from a Windows™ application would be higher than the modem speed as seen from the phone line side. The reason is because when compression apply, more data are transmited between the computer and the modem than on the phone line between the two connected modems. The speed at which the data are transfered between the computer and the modem is called the DTE speed and is the only one that **Modem Speed-meter** can see.

More on slow and fast modems

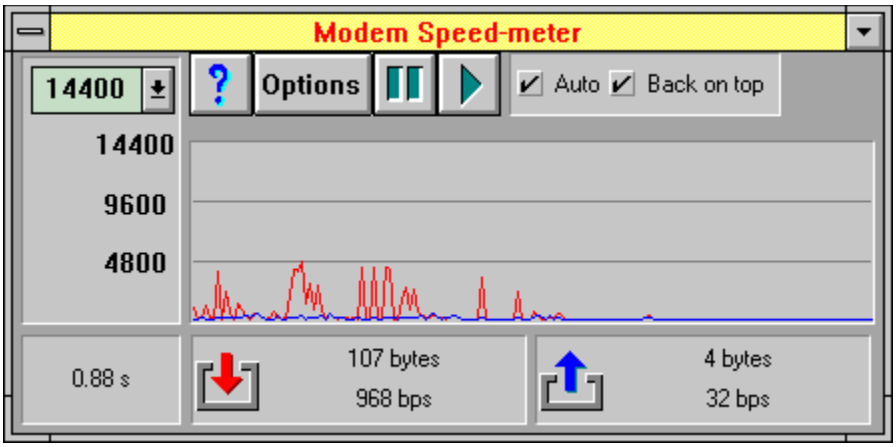
You may want to have a look to the definition section now.

Modem Speed-meter hooks itself on the Windows™ communication functions to watch how many bytes are received from the modem and transmitted to the modem. The numbers are totaled during the sampling interval. The displayed values are **averaged** by the duration of each sampling interval.

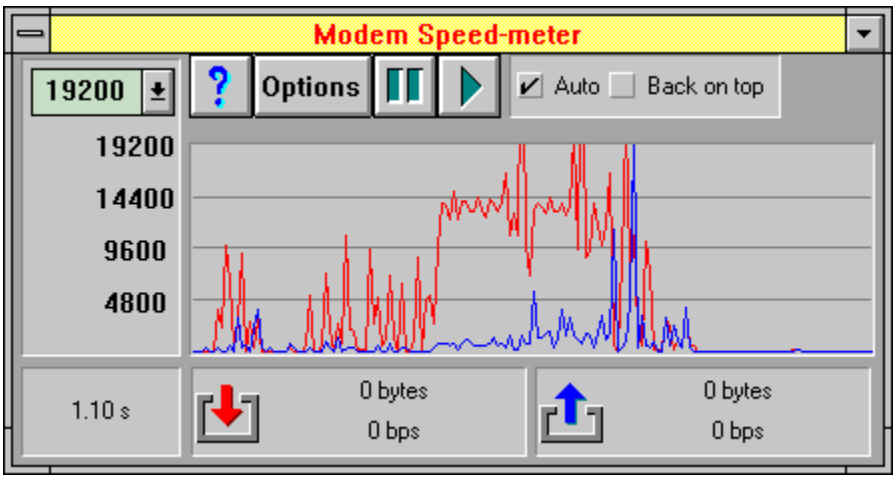
If the amount of data to transmit is very low, the transmission speed will appear low (even if the data are actually transmitted very fast) because the modem will spend an appreciable amount of time without having anything to do.

The average transaction speed may also be low when performing a large number of small transactions. In that case, the reason of a low transfer speed may be that the BBS server is spending more time to seek and get the data than sending it.

The graphic below is typical of a bottleneck on the lines. Three CompuServe forums were accessed and the subject line of more than 100 messages were dowloaded. Although everything worked smoothly, one can see that the average speed is very low with peaks limited to 4800 bps. It is also possible that so many users were connected at the same time that the server was unable to sustain transfers at 14.4 Kbps.



With the same 14.4 Kbps capable modem, the graphic below has been done when accessing the CompuServe Internet home page (starting with an empty browser cache). Downloading every images that are part of the page implied a lot of transactions and it is interesting to see that the modem was able to add enough compression to burst some of the data faster than its rated speed (14.4 Kbps).



On screen measurements

The **left** mouse button is used to position up to 2 markers in the graphic window.

The **right** mouse button removes the marker(s).

When a marker is set on the graphic window, the status section at bottom of the **Modem Speed-meter** window changes to indicates the values of the time intervall, bytes received, bytes transmited and modem speed corresponding to the marker position. Also the time intervall window is updated and the word **marker** appears to signal the meaning of the displayed values.

The marker can be dragged by keeping the left mouse button pressed while moving the mouse. The values changes as the marker is dragged to a new position.

A second marker can be positionned by pressing the right mouse button at least 10 pixels away from the first marker. The 10 pixels limit allows to re-select more easily the first marker and drag it away.

When two markers are present, the bottom section of the window changes to report on the data between the markers. The **bps** is the number of bytes received or transmitted divided by the elapsed time in second. The word **measure** appears to signal the meaning of the displayed values.

When the two markers are present in the graphic window, they can by moved either by dragging one of them or by clicking anywhere in the graphic area. In this last case, the nearest marker jumps to the mouse cursor position.

File distribution and installation

The **Modem Speed-meter** package contains 7 files :

modmmetr.exe	Main executable file
modmhook.dll	COM port hook routines
modmmetr.hlp	Help file
readme.wri	Program description and installation instructions
bwcc.dll	Borland® library
win95.txt	A text file explaining that **Modem Speed-meter** is not supported under Windows 95.

Modem Speed-meter will create a file called modmmetr.ini so that it reminds your last settings. This file will be located in the directory where resides **modmmetr.exe**. It is not necessary to distribute this file.

Modem Speed-meter may be installed in any directory on your hard disk. It is suggested to install all the files in a new directory called C:\MODMMETR or C:\UTIL\MODMMETR or whatever you want.

The Borland® library bwcc.dll must be installed in your WINDOWS\SYSTEM directory if not already there.

Once all the files are on your disk, all what you have to do is to put the **Modem Speed-meter** icon in your program manager window.

Registering Modem Speed-meter

You are welcome to try out **Modem Speed-meter** for **21 days**. If you want to use this program past the trial period, you must register and pay 15 US dollars or 75 FF for a single license.

As a registered user, you will receive a registration code that **Modem Speed-meter** will use to stop bothering you with the "**Please register**" reminder screen and the 5 mn per session limit.

CompuServe registration :

To have the registration fee added to your CompuServe bill, type GO SWREG. The **Modem Speed-meter** id is **10535**

Ordering by check :

The payment must be in French Francs.

Send a check or an international postal money order to :

Vincent VALLET
34 rue des Coquelicots
91540 MENNECY
FRANCE

Feedback and comments :

Even if you do not register, your comments are welcome. My e-mail address is :

76017,1425 from CompuServe

76017.1425@compuserve.com from Internet.