Help Index for ModemSta

Modem status iconic indicator for Windows using 3D animated icon.

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Select one of sections below by clicking on it with the left mouse button or by using the Tab key to move the highlight and pressing Enter. For information on how to use Help, press F1 or choose Using Help from the Help menu.

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Introduction

If You have an internal modem, an external modem out-of-sight of Your computer or a PCMCIA modem, this is the program for You!   **ModemSta**, the MODEM STATUS ICONIC INDICATOR, will help You by showing a small animated icon replica or indicator display window (several formats available) of a typical modem's front panel.
A number of handy functions has also been added such as modem initialization, logging of incoming calls and connections, additional status info, summary of all communications settings in DOS and Windows, generation of sound in parallel to or instead of the telephone's ring signal and at line connection events. The status and activity of the parallel ports in Your system can also be monitored.

An unique feature is the **SPY** function, which makes it possible to detect the **CONNECT STRING** (to show actual data connection speed, error and compression protocols), calculate the **actual TD/RD speed, show number of transmitted bytes** and **log dialed telephone numbers** to the connect log.

ModemSta offers the following features:

Basic functions

* For use with internal and external modems connected to any **COM** port and parallel devices connected to any **LPT** port.

* Can automatically scan the ports at start-up to determine available parallel ports.

* Can be started **after** other programs are connected to the com ports. Even possible to start during a connected modem session.

* **Several copies** can be run in **parallel** to monitor activity of several serial and parallel ports. Each port has its own settings which are saved in the modemsta.ini-file. ModemSta starts using the last used port as default. ModemSta can also be started with any port, using a command line parameter.

* **Remembers** all its settings between sessions. Settings are port specific and saved when You switch between ports or end the program.

Views and colors

* **Square, large & small horizontal** views and ANIMATED icon to display the signals CTS, RI, DCD, DSR, TD and RD.

* **Modem & Courier** views to resemble looks of actual modems. Display of HS, AA, CD, RD, SD, TR, MR, RS, CTS and ARQ signals.

* Additional **Titlebar View**. Tracks the active window and puts a ModemSta display in the title bar. Can be **automatically** activated.

* **Double-click** on the window of the square or horizontal views to **toggle** the **title bar on/off**.

* **Right click** on ModemSta to go directly to the Setup & About dialog.

* User selectable **color** for **Lamp On/Off, Text** and **Background.**

* User selectable status **lamp look** (flat or round).

* User selectable status **lamp update rate**.

* **Always on top** setting or **Auto detect on top** feature. When the *auto detect mode* (serial ports only) is selected, ModemSta goes automatically into *Always on top mode* during Receive/Transmit activity. After the adjustable inactivity time, *Always on top* is deactivated until further Receive/Transmit activity is detected.

* **Auto Exit** feature. After a preset number of seconds after a disconnect (DCD/CD goes low), ModemSta exists.

Sounds and logging

* **Play .wav file** when the telephone rings (RI or AA is detected). Can be used e.g. when the computer is used as a fax machine and there is no telephone connected in parallel to the computer. Select any .wav sound in Your system or select the built-in speaker **BEEP**.

* **Play .wav files** when connections starts or ends (DCD/CD goes high or low). Select any .wav sound in Your system or select the built-in speaker **BEEP**.

* RI **logging to file**. Log file shows list of incoming calls with date, time and number of signals. Can be used in parallel to an answering machine to log actual time of calls. Show and delete log-files from the **Setup & About** dialog box.

* DCD **logging to file**. Log file shows list of start of connection, end of connection and calculates up-time. Show and delete log-files from the **Setup & About** dialog box.

* **Show Dial String in Log**. ModemSta writes the dial string (usually the telephone number) to the connection log. See **SPY functionality**, below.

* **Log Number of Transmitted Bytes**. Display and add to the log file the number of bytes sent and received.

* **Log Connect Time**. The current section only or totally accumalated time.

Communication and debugging functions

* Send an **initialization string** to the modem, either automatically at start-up or from the **Setup & About** dialog.

* Display additional **com port status info** (bytesize, parity, stopbits and transfer speed) in the title bar.

* Display **all communication port info** available from DOS, Windows and settings in system.ini.

SPY functionality

ModemSta has implemented a **SPY** function which makes it possible to spy on WriteComm and ReadComm activity on the com ports. The information is used to:

* Display **connect string**. The connect rate (modem to modem speed) is usually presented in the connect string, as well a error correction and compression protocols.

* Display **read and transmit data rate** (char/sec, CPS).

* Log **number of sent and received bytes**.

* Log **dialed telephone number**.

* Detect **ARQ compression** for the Courier display.

n Win95, it has yet only been implemented for 16 bit communication programs.

Installation

■
Use SETUP.EXE

ModemSta files are installed using the Windows-hosted installation program.

If you received ModemSta as an archived (.ZIP) file, unarchive it into a temporary directory. From within Windows, run SETUP.EXE to perform installation.   If you received ModemSta on a disk, simply run SETUP.EXE located on the disk from within Windows.

If You are running Windows 3, SETUP.EXE will also copy CTL3D.DLL to the Windows system directory, but will not overwrite a newer version.

A Program Manager Group will also be created, if You select so.

You can also manually install the files by copying them to a directory and create icons in the Program Manager. If You are running Windows 3, do also copy CTL3D.DLL to the Windows system directory, but do not overwrite a newer version if one is already installed.

■
How to start ModemSta

You can start ModemSta in many ways:

* If a Program Manager Group was created when ModemSta was installed, just open the ModemSta group and double-click the ModemSta icon .

* Select the Program Manager Run... option and type modemsta.exe. Include the path name, e.g. c:\win\share\modemsta.exe, if the directory is not in Your path.

* Add ModemSta icon to the **StartUp Group** (copy or drag the icon into this group) to start ModemSta automatically each time you start Windows.

* Add (PATHNAME) modemsta.exe to the [Load] section of your win.ini file to start ModemSta automatically each time you start Windows.

* You can also start ModemSta in e.g. a **Winsock dial-in script** by adding the command exec modemsta.exe in the script. Use the ModemSta **Auto Exit** feature to automatically exit ModemSta when disconnecting.

■
Uninstall

Delete the files in the ModemSta directory and delete modemsta.ini in the Windows directory.
You may also consider to delete CTL3D.DLL in the Windows system directory, but this library file may be needed by other applications. No changes have been made to other files.

Settings

All settings can be reached via the buttons on the **Setup & About Dialog**

◆
Basics

You can **go directly** to the Setup & About Dialog by **right-clicking** on the ModemSta display or icon.
You can also **always reach** the SYSTEM MENU by pressing **ALT+SPACE** when ModemSta has the focus (click once on ModemSta, use Windows Task Switcher or Fast Switching using ALT+TAB).

Views:
ModemSta can be used either in its **ICONIC VIEW** (minimized), in its **NORMAL DISPLAY VIEW** (with or without a Title). An additional **TITLEBAR VIEW** can also be activated, ModemSta then places a small display in the title bar of the active window.
If You double-click ModemSta, the **title bar** will disappear. Double-click again, and it will reappear.

Compatibility:
ModemSta requires Windows 3.1 or higher. For **Win95** compatibility, see section Comments and limitations.
In each Dialog, functions not implemented for 32 bit comm programs are indicated with *.
If You have any problem, see **Troubleshooting** under section Comments and limitations

Autocheck/-nocheck:

From version 1.8, **ModemSta will NOT automatically scan** for available ports at startup unless the command line parameter **-autocheck** is given, see below. The parameter **-nocheck** is not needed anymore..

With the command line parameter **-autocheck**, e.g. modemsta.exe -autocheck, ModemSta **will check all possible ports** and select the first available port (e.g. COM1) first time You run the program. ModemSta will then remember all its settings from session to session. The COM or LPT port to be monitored can be changed using the **Port to Monitor** on the Setup & About Dialog, which will show all detected ports, available to Windows, in the system.

If You run DOS communication programs or start ModemSta during a connected session, do not use the **autocheck** feature. *This is very important when You are using DOS communication programs, since Windows can easily hang the communication ports when device contention occurs.* Generally, do not use ModemSta when using DOS communication software under Windows. See the Comments and limitations section.

Instances:
Several copies of ModemSta can be run in parallel to monitor activity of several COM ports. Each port has its own settings which are saved in the modemsta.ini-file. ModemSta will at start-up use the last port as default, but another port can be given as a command line parameter: modemsta.exe 2 will start a copy of ModemSta monitoring the activity on COM2 etc. For the parallel ports, add 128: modemsta.exe 129 starts with LPT1. ModemSta can not accept multiple comport arguments, so one command line for each running copy of ModemSta is required.
You can also add the **-autocheck** parameter, to automatically scan for the available comm ports in the system, see above.

Setup & About Dialog

◆
Port to Monitor

Using this Drop Down List, You set the port to be monitored by ModemSta. When starting ModemSta, no Port Check is automatically performed and therefore all ports COM1-COM4 and LPT1-LPT3 can be selected.

If You press the **Detect Com Ports** button, ModemSta will test which ports are available to Windows and reduce the **Port to Monitor** list.

◆
Hang-up NOW!

This button will force the software to drop the line and a hang-up will occur. You should be able to hear the click with most modem and the   DCD/CD will go low.

All other settings are grouped in a number of minor dialog according to their functions:

General Options
Layouts
Sounds
Loggings
Modem Init
Port Summary
Titlebar
Inactivity
Show in Title/Display

General Options Dialog

◆
Stay On Top

Select **Always on Top** to keep ModemSta always visible.

Select **Normal** to deselect any On Top features.

Select **Auto detect** (serial ports only) to activate the ModemSta auto detecting Always-On-Top feature: ModemSta listens for activity on the Transmit/Receive lines (TD/SD & RD) and goes into **Always On Top** mode when activity is detected. After a predetermined time (default: 60 seconds), ModemSta deactivates the **Always On Top** mode until further activity on the Receive/Transmit lines. The **Delay** can be changed by scrolling or entering a new value in the input box. The value is in seconds.

◆
Monitor Port

Scroll or enter the desired update rate for the status lamps. Value can be between 0 time/second up to 18 times/second. If You select 0, an alternative is temporarily added to the System Menu**: Update Lamps Now!**, which can be used to read the port data and update the display manually. Default value is 10.

◆
Fast Data

The **Fast Data** option monitors the activity on the data transfer channels as quickly as the system can respond. This option is automatically disabled when update rate is set to 0. *The computer may hang or reboot during heavy data traffic when the **Fast Data** option is on.* This is a known and documented behavior in Windows. If You have problems, switch the **Fast Data** option off. See the Comments and limitations section.
Also, when the system is very busy (dependence on Your CPU type and speed), the TD/RD lamps will not
be always be re-drawn at maximum speed.

Win95: Fast Data will not detect 32 bit communication program activity (the default detection method still works).

◆
No Startup Logo

When You have registered ModemSta, You can switch off the start-up bitmap & sound using this checkbox.

◆
No Direct Hardware Access

There are situations when ModemSta directly accesses the hardware to obtain some of the status signals. This switch de-activates the direct hardware access for debugging purposes.

Auto Exit ModemSta after Disconnect

ModemSta will **exit automatically** after a disconnect (DCD/CD goes low) when this checkbox is marked. The **Delay** is changed by scrolling or entering a new value in the input box. The value is in seconds.
If another connection (DCD/CD goes high again) is made within the delay time, ModemSta will continue to operate.
This feature was added for automatic start and exit when using e.g. a Winsock dial-in script. Add exec modemsta.exe to Your script before the dialing commands to start ModemSta for the session only, and activate the Auto Exit feature to automatically exit ModemSta when session ends.

No Warning when Exiting while Connected

If existing ModemSta while still connected, a message box will appear to inform You that You are still connected. Checking this box will remove this warning message.

Tray Icon

Win95 only: When using 32 bit comm programs, Win95 places a small modem icon in the SYSTEM TRAY (close to the clock) when connected, but not for 16 bit comm programs. ModemSta can fill this hole by placing a similar icon in the SYSTEM TRAY when a 16 bit comm program is connected if You mark this checkbox.

Layouts Dialog

◆
Layout

The following layouts are available (serial ports only) for the non-iconic views of ModemSta :

Large Square	six indicators	
Large Horizontal	six indicators	
Small Horizontal	six indicators	
Modem	nine indicators	Generic external modem
Courier	nine active + three passive indicators	Similar to USR Courier

The format is immediately updated if ModemSta is in its non-iconic mode (move the **Setup & About** window if ModemSta is covered).

Please note that the indicators on the iconic view are the same for all COM ports views, including the Modem and Courier views.

If CONNECT STRING in Display or Title or TD/RD Speed in Display or Title is activated, the **Small Horizontal**, **Modem** and **Courier** displays will show an extended version the non-iconic view. Two additional text lines will be shown with the **CONNECT STRING** and the measured **TD/RD Speed** (in CPS).
Depending on the length of the connect string, the full string may not be shown in the text window. Put ModemSta in the iconic view and activate Connect String in Title to show the full connect string in the icons title.

◆
Lamp look

Use the **Flat** or **Round** checkbox to select the look of the ModemSta lamps.

◆
Colors

Use the **Lamp ON**, **Lamp OFF, Text** or **Background** push buttons to go to the color settings dialog for the lamp colors, Text and Background.

◆
3D Effects

The 3D effect of the **Icon** (the Minimized view of ModemSta), the **Normal Display** and the **Titlebar Display** can be set individually.

Normal	will give only a black border.
3D Recessed	will create an effect of a slightly recessed display.
3D Raised	will create an effect of a slightly raised display.

*Win95: There is no icon on the desktop any more, and the 3D effects of the **Icon** has been deleted.*

Sounds Dialog

◆
Sounds

Toggle the **Incoming Call (RI)** checkbox on/off (serial ports only) if You want ModemSta to play a .wav file when RI or AA is detected (the telephone rings).   Click the **Sound** button to select another sound. A file menu will be presented. You can test the sound while browsing around in different directories.
**Beep** will set the sound to Beep in Your system. This can be a system sound or the built-in speakers default beep if You do not have any sound card in Your system.

Toggle the **Connect (CD high)** checkbox on/off (serial ports only) if You want ModemSta to play a .wav file when connection is made (carrier detected, DCD/CD high).   Click the **Sound** button to select another sound. A file menu will be presented. You can test the sound while browsing around in different directories.
Beep will set the sound to Beep in Your system. This can be a system sound or the built-in speakers default beep if You do not have any sound card in Your system.

Toggle the **Disconnect (CD low)** checkbox on/off (serial ports only) if You want ModemSta to play a .wav file when a connection end (carrier lost, DCD/CD low).   Click the **Sound** button to select another sound. A file menu will be presented. You can test the sound while browsing around in different directories.
Beep will set the sound to Beep in Your system. This can be a system sound or the built-in speakers default beep if You do not have any sound card in Your system.

Win95: the system sound (.wav-files) are located in the Win95\media directory.

(clicking the Sound button:)
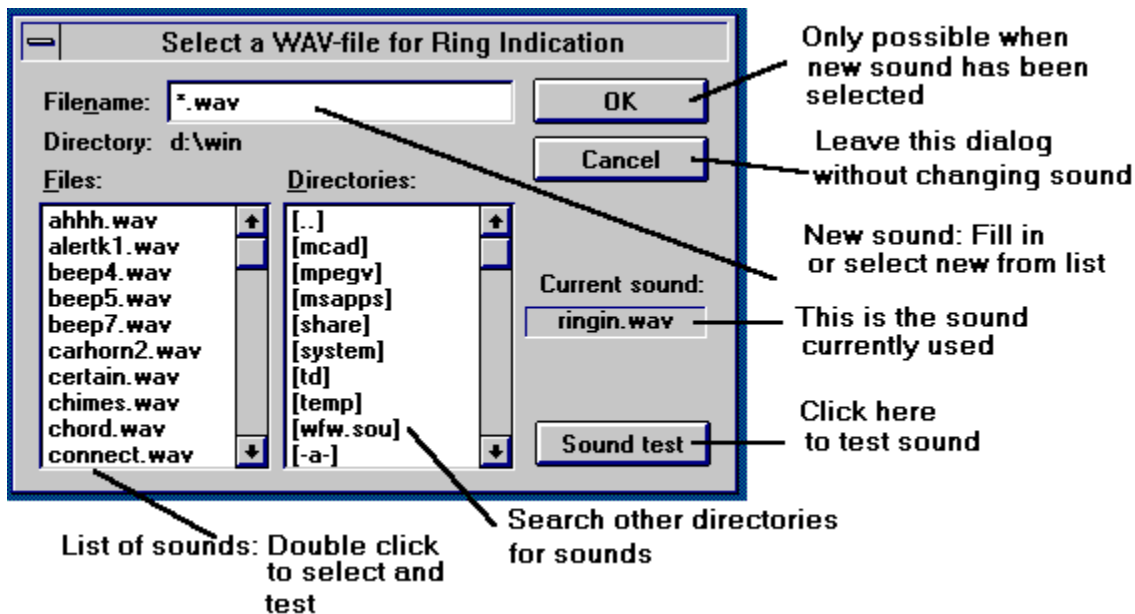
Loggings Dialog

Incoming Calls (RI high)

Toggle the **Incoming Calls (RI high)** checkbox on/off (serial ports only) if You want ModemSta to log RI or AA activity to file. A log file will be created and new entries are added at the end of the file. The file, modemsta.ri, is placed in the **ModemSta directory** and looks like this:

```
Call: 4/25/95 19:09:35    Signals= 1
Call: 4/25/95 19:23:34    Signals= 2
Call: 4/25/95 19:25:26    Signals= 1
```

ModemSta tries to read the systems date and time format (from the Control Panel) but may not be correct in all system. Then the default US MM/DD/YY date and a 24h time format is used.

The **Show** button starts modemsta.ri with the editor associated to .ini-files in the system. The **Del** button deletes modemsta.ri.

Connects (CD high)

Toggle the **Connects (CD high)** checkbox on/off (serial ports only) if You want ModemSta to log DCD/CD activity to file. A log file will be created and new entries are added at the end of the file. The file, modemsta.dcd, is placed in the **ModemSta directory** and looks like this:

```
Connected: 4/25/95 19:01:39  Disconnected: 4/24/95 19:03:21  Total   Time =  0:10:02
Connected: 4/25/95 19:23:46  Disconnected: 4/24/95 19:24:37  Total   Time =  0:00:53
Connected: 4/25/95 19:25:38  Disconnected: 4/24/95 19:43:38  Session Time =  0:18:00
Connected: 4/25/95 20:40:41  Disconnected: 4/24/95 20:52:59  Session Time =  0:12:18
```

You can choose between logging the current session (**Session Time)** or the **Total Connect Time** (You can reset the **Total Time** in the **Show in Title/Display Dialog** or by SHIFT+Left Click on ModemStas icon/display).

ModemSta tries to read the systems date and time format (from the Control Panel) but may not be correct in all system. Then the default US MM/DD/YY date and a 24h time format is used. Connect time is in HH:MM:SS.

The **Show** button starts modemsta.dcd with the editor associated to .ini files in the system. The **Del** button deletes modemsta.dcd.

The **CD Uptime** before an entry is made in the log can be changed by scrolling or entering a new value in the input box. The value is in seconds. Default is 30 seconds.

The **Negotiation Delay** will add a desired number of seconds to the total connect time (the Time= value in modemsta.dcd) to account for the additional telephone connect time from the dialing until DCD/CD is detected. The value is in seconds. Default is 0 seconds.

Show Dial String in Log

ModemSta can listen for a 'D' in the communication strings before DCD/CD is high, skips 'T' (for tone dial) and 'P' (for pulse dial) and writes the rest of the string, usually the dialed telephone number, in the **log file** when the connection has finished (DCD goes low again). This function can only be activated if logging (**Connect (CD high)**) has been activated.

ModemSta also tries to check for **incoming calls** by looking for 'ATA'. ModemSta then writes '**Answering**' in the log.

Connection logging (**Connects (CD high)**) must be activated, otherwise this checkbox is grayed.

ModemSta can not detect numbers directly dialed from a NVRAM, or detect automatic answer (when ATS0 is set to <>0):

Win95: Not implemented for 32 bit communication programs.

◆
Show Number of Transmitted Bytes in Log

ModemSta can also log the number of bytes sent and received, and after a completed session write this to the log file. The detection is only active when connected (DCD/CD high). This function can only be activated if logging (**Connect (CD high)**) has been activated.

The RESET button resets the counters for the bytes sent and received.
You can also reset the counters by SHIFT+Mouse RIGHT-CLICK on ModemSta.

Win95: Not implemented for 32 bit communication programs.

Modem Initialization Dialog

◆
Modem initialization

Toggle the **Modem Init at Startup** checkbox on/off (serial ports only) if You want ModemSta to send a modem init string to the modem at start-up.

Enter the modem initialization string into the **Modem Init String** edit box.

Push the **Send NOW!** button to send the init string to the modem at this time (serial ports only) . The selected active port is shown after the **Modem Init at Startup** checkbox. Ports are changed in the SYSTEMS MENU.

Port Summary Dialog

Push the **Port Summary** button in the **Setup & About** dialog and You will be presented with a summary of the available communication port status information for DOS and Windows.

Typical Port Status Screen Shot when running Windows 3:

Typical Port Status Screen Shot when running Windows 95:

In Win95, this is the DOS version!

Total number of ports according to DOS

The Win95 comm driver shall not be replaced!
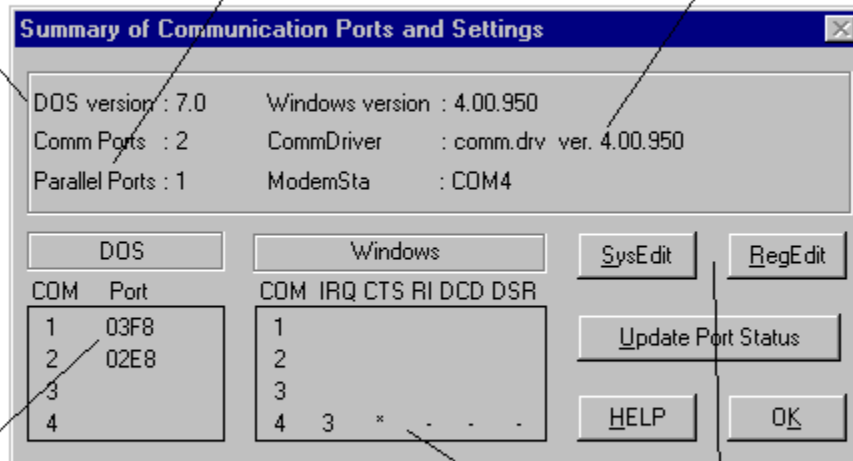
Always in sequence, no "holes" allowed!

Actual status shown here

Inspect and change DOS and Windows settings

In the top section, some basic information is presented about Your system: DOS version, number of serial and parallel ports in the system, Windows version, name and version of the communications driver in Windows and if interrupt sharing of communications ports has been activated in Windows.

The number of comm ports (COMx) and parallel ports (LPTx) is read from the DOS. Not all ports may be available to Windows.

DOS

This section lists what DOS reports about the communication ports.

Normally, the following list is correct for your PC:

Port	Base address	IRQ
COM1	03F8	4
COM2	02F8	3
COM3	03E8	4
COM4	02E8	3

DOS will always fill holes in this list, so if You use COM1, COM2 and COM4, they will still be reported as COM1-COM3 by DOS but the base address (**Port**) should still be correct.

The **Chip** column will report the kind of UART used for serial communication. ModemSta uses National Semiconductor's UART model numbers. There is no safe method to distinguish between e.g. 8250 and 16450, so ModemSta might report false info. The only way to ensure the real type of UART is to remove the cover of your computer, and check what is written on

the UART.
ModemSta will not report type of UART for communication ports not available from Windows or ports currently opened in Windows.
Win95: No Chip information is shown.

Windows

This section lists the status of the communication ports available to Windows.
If You use this for debugging and change the port status using a communication program, like Terminal, You can update the information by pushing the **Update Info** button. DO NOT DO THIS during high-speed data transfer, since it will lead to errors in the communication flow.
Unless ModemSta has been started with the **-autocheck** command line parameter, this section is empty.

system.ini settings

This section lists the communication parameters settings from the system.ini file in the Windows directory. Most of this information is also available from the **Ports** icon in the **Control Panel**.
Windows uses the **Base** and **IRQ** information to e.g. set COM3 or COM4 address and IRQ.
FIFO indicates if there is a setting to activate the buffers of 16550 high-speed UARTs. This should be set to 1 if You have a 16550 or equivalent UART and use high-speed communications (typically 14400 bps or higher). It can be changed by editing or adding a line to the [386Enh] section of system.ini, saying COMxFIFO=1, where x= is the comm port number (1, 2, 3...).
Win95: No system.ini information is shown.

By pushing the **Edit SYSTEM files** button (*Win95:* **SysEdit** *push button*), SYSEDIT.EXE is started so that DOS and Windows system files can be inspected and edited.

Win95: Setting information is also available in the Registration Data Base. The **RegEdit** *push button starts the Registration Editor.*

Additional Titlebar Display Dialog

◆
Status

This puts an additional display in the **title bar** of the active window.
AutoSense will automatically switch the Titlebar Display feature on/off when a connection is detected (<u>DCD/CD</u> goes high/low).

◆
Look

The layout of the titlebar bitmap. Can be similar to the **Small Horizontal**, the **Modem** and the **Courier** looks.

◆
Lamp Look

The look of the lamps can be selected by selecting **Flat** or **Round**.

The display can be placed **Left** or **Right** with an **Offset** (a number of pixels, scroll or enter the desired value).
*Win95: The display will always be displayed **Right**. Also, the offset will be set to a minimum a 15 pixels.*

Inactivity Dialog

◆
Warn if Inactive... for X minutes

If no TD/RD activity for X minutes has been detected, a warning message will appear on the screen.

◆
Disconnect if Inactive... for X minutes

If no TD/RD activity for X minutes has been detected, ModemSta will automatically disconnect.

The **Trigger only on RD (winsock)** may solve a problem when using a modem/winsock connection (e.g. Trumpet Winsock). Even if no activity appears, a TD is sent every 60 seconds (a ping.). Activating the checkbox makes **Warn** or **Disconnect** only to look at RD, which appears to solve the problem.

Show in Display/Titlebar Dialog

◆
Connect Time in Display/Connect Time in Titlebar

Toggle the **Connect Time in Display/Titlebar Display** checkbox on/off (serial ports only) to additionally display the connect time ion the Display or in the Titlebar. The **Negotiation Delay** (Loggings Dialog) is added to the displayed connect time.
The time can be placed **Left** or **Right**. If You are running *Win95*, it will always be displayed **Right**. The OFFSET is the same as for the **Additional Titlebar Display**, see **Setup & About Dialog.**

Show Total Connect Time shows the accumulated connect time since a **Reset** was made. The total connect value is also accumulated between session.
You can also reset the accumulated connect time by SHIFT+Mouse LEFT-CLICK on ModemSta.

◆
Comm Status in Display/Comm Status in Title

Toggle the **Comm Status in Display** checkbox on/off (serial ports only) if You want ModemSta to show additional port status information in the display (not for 32 bit communication programs).
The information can also be shown in the title by checking the **Comm Status in Title** on/off.

Bytesize, parity, stop bits and data transfer rate are shown (e.g. COM1 - 8N1 9600). When not activated, the port name only (e.g. COM1) is shown in the title.
The first character is the bytesize: 4 - 8.
The second character is the parity: N = No Parity
                                                      O = Odd Parity
                                                      E = Even Parity
                                                      M = Mark Parity (always set to 1)
                                                      S = Space Parity (always set to 0)
Third character is the number of stopbits: 1, 1.5 or 2
Last number is the speed of the port. Common values are 2400, 9600, 14400 and 19200 bits per second.

The indicated speed is between **the modem and the computer**, not the line speed (modem-modem). If You are using modern high-speed modems with transfer rates of e.g. 14400 or 28800 bps and compression, e.g. V.42 or V.34, the speed between the modem and the computer is often set by the software to four times the line speed because of the compression. 14400 bps line will normally have 57600 bps modem-computer speed and 28800 bps will have 115200 bps.

Win95: Not implemented for 32 bit communication programs.

Using the SPY functions, ModemSta can detect the CONNECT STRING, which usually contains information about the connection data rate as well a error correction and compression protocols, see below.

◆
Connect String in Display/Connect String in Title

Toggle the **Connect String in Display** checkbox on/off if You want ModemSta to listen for the CONNECT string when dialing and making a connection. ModemSta listens for *CONNECT xxxx* and presents the rest of the CONNECT line.

The **Connect String** is shown while connected (<u>DCD/CD</u> high). The Modem, Courier and Small   Horizontal displays will automatically change to extended versions to show the information.
The information can also be shown in the title by checking the **Connect String in Title** on/off.

The modem must be set to show detailed connect info (E.g. X1 or higher and &A3 to show error-control protocol indicators and data-compression type, using a USR Sportster modem).

In the **Courier** display, the ARQ/FAX lamp (<u>ARQ</u> indicates compression) will be activated during a connection if 'ARQ' was detected in the connect string.

There is yet no good method of automatically updating the connect speed if the modem negotiates a new connect speed. (V.34 modems).

The **FONT** for the extended display can be changed in modemsta.ini, in the <u>Windows</u> directory.
Look for the lines
```
Font Size SPY=12
Font Style SPY=Arial
```
and change to another font size or a font name (one entry for each comm port).
The size of the extended display will changing according to the height of the selected font.

Win95: Not implemented for 32 bit communication programs.

◆
TD/RD Speed in Display / TD/RD Speed in Title

Toggle the **TD/RD Speed** in Display checkbox on/off to have ModemSta to monitor the number of characters sent in each direction. Values are displayed if TD rate or RD rate <>0. The values are in CPS (char/sec).

The **TD/RD Speed** info is shown during the **Speed Update** interval. The Modem, Courier and Small Horizontal displays will automatically change to extended versions to show the information.
The information can also be shown in the title by checking the **TD/RD Speed in Title** on/off.

Win95: Not implemented for 32 bit communication programs.

◆
Speed update

You can set the update interval, which affects how often the TD/RD presentation is updated. The value is in seconds.

The indicator lights (COM ports)

The indicator lights are:

Square, Large & Small Horizontal and Iconic views

CTS = Clear To Send. This signal indicates that the modem is ready to accept data from the computer.

RI = Ring Indicator. This signal indicates an incoming call. It is an hardware equivalent of the Hayes modem's RING message. On the Modem and Courier views, AA is used for this signal.

DCD = Data Carrier Detect, also CD (Carrier Detect) or RLSD (Receive Line Signal Detect). Indicates that a signal carrier has been detected, which usually means that the modem is connected to another modem. Some modems need to be given the command AT&C1 or change a hardware switch to not show this signal continuously ON.

DSR = Data Set Ready, also MR (Modem Ready). Indicates that the modem is active and waiting instructions.

TD = Transmit data, also SD (Send Data). Data is being transmitted from the computer to the modem.

RD = Receive data. Data is being received to the computer from the modem.

Modem & Courier views

HS = High Speed. This signal is used to show the speed between the modem and the computer. ModemSta turns **HS ON** for speed settings **higher than 9600 bps**. Remains on until next connect.

AA = Auto Answer. The Auto Answer mode of a modem can not be detected by ModemSta. However, this signal is also used for the Ring Indicator RI.

CD = Carrier Detect, also DCD (Data Carrier Detect) or RLSD (Receive Line Signal Detect). Indicates that a signal carrier has been detected, which usually means that the modem is connected to another modem. Some modems need to be given the command AT&C1 or change a hardware switch to not show this signal continuously ON.

OH = Off Hook. This modem signal can not be detected by ModemSta.

RD = Receive data. Data is being received to the computer from the modem.

SD = Send data, also TD (Transmit Data). Data is being transmitted from the computer to the modem.

TR = Terminal Ready, also DTR (Data Terminal Ready). Detects the status of the DTR signal. Some modems need to change a hardware switch to not show this signal continuously ON.

MR = Modem Ready, also DSR (Data Set Ready). Indicates that the modem is active and waiting instructions.

RS = Request to Send, also RTS. Detects the status of the RTS signal. Some modems need to be given the command AT&R2 or change a hardware switch to not show this signal continuously ON.

CS = Clear To Send, also CTS. This signal indicates that the modem is ready to accept data from the computer.

SYN = Synchronous Mode. This modem signal can not be detected by ModemSta.

ARQ = Error Control/Fax Operations. The signal indicates that an error control connection has been made. The modem signal is detected by ModemSta if **Connect String in Display** or **Connect String in Title** is activated and ARQ is detected in the connect string.
The Fax Operation is not detected by ModemSta.

Parallel view (LPT ports)

The indicator lights are:

First column: Data Out   Base Address+0
Second column: Status In   Base Address+1
Third column: Control Out   Base Address+2

Comments and limitations

◆
Typical operation

A normal modem status at computer start-up before trying to connect to another modem would normally be CTS and usually DSR indicators active. Some modems may also indicate DCD before a connection has been established.

Many modems can be programmed to save a new "permanent" setup in a non-volatile RAM. On *Hayes-type modems*, the command **AT&C1** can also be used to initiate the modem to show DCD active only when a connection has been made. The **Send Modem Init String** function can do this.
You can start ModemSta during a connected session, but avoid starting ModemSta during a file-transfer with the **-autocheck** parameter, since it may disrupt the file-transfer, see Settings.

Examples:
(1) Internal modem is installed on COM1, the mouse is connected to COM2, COM3 is enabled but not connected and COM4 not enabled (no hardware).
ModemSta reports that COM1 & COM3 are available.
COM1 shows the following status lights: CTS and DSR (and DCD on some modems, see above) at start-up, RI when the telephone rings, DCD when connected and TD/SD & RD whenever data (characters) are transmitted. COM3 shows no status lights.
(2) Internal modem on COM4, mouse on COM1, COM2 enabled but not connected and COM3 not enabled (no hardware).
If COM3 has not been disabled in SYSTEM.INI (troubleshooting, below), ModemSta reports that COM2, COM3 and COM4 are available. COM4 shows the same status lights as example (1).

◆
TD/SD & RD:

Most data communication is made without any local echo; the host machine (or modem) is echoing the character back to Your screen (the terminal). This means that inputting data from Your keyboard will normally force both the TD/SD and RD signal active.
If You are using the **Fast Data** option, Windows may not always be able to re-draw the display fast enough for all activity to be displayed.

◆
Troubleshooting

* ModemSta depends closely on the **COMM.DRV** in the Windows system directory. ModemSta may or may not be compatible with other vendors replacement for COMM.DRV in the system directory. ModemSta has successfully been tested with **CYBERCOM.DRV** from CyberSoft Corporation Pty Ltd, **WFXCOMM.DRV** from Delrina Technology Inc. (Winfax), **RHSICOMM.DRV** from Rockwell, as well as **COMM.DRV** for Windows 3.1, **COMM.DRV** for Windows for Workgroups 3.11 and the generic drivers for 16 and 32 bit comm programs in **Win95**.
Using **EFAXCOMM.DRV** from Eclipse Fax V6.0 will cause problems when using the **Fast Data** option (see section above).
Check in Your SYSTEM.INI, in the Windows directory, under the [Boot] section for a line like

"comm.drv=comm.drv" or "comm.drv=wfxcomm.drv" to determine that You have a comm driver loaded and the name of it. You can also get this information from the Port Status button in ModemSta. If there is a problem with the comm driver, the most likely symptom is that the status of CTS, DSR and DCD are not detected. Please report problems to the author, see section About the program.

* Do not try to communicate with an internal modem that is switched off, as can be done with the modem in some laptops. The computer usually hangs and must be switched off and restarted.

* If You are using Windows for Workgroups, ModemSta may indicate that COM3 or COM4 are available, even if You do not have any hardware installed. You should not have a system.ini setting of IRQ and Base for ports not available in the system (use **Port Summary** in ModemSta to check this).
If You disable the following two lines in SYSTEM.INI in the Windows directory , (use **Edit System Files** from   the **Port Summary**), for each incorrect com port by putting a semicolon first on the line:
        ;COM3Irq=4
        ;COM3Base=03E8
WfWG will report the correct com ports.

* Some communication programs (e.g. fax programs) communicates with the comm ports using own routines. This can not be detected by ModemSta, usually TD/SD and RD activity.

◆
SPYing on WriteComm and ReadComm.

ModemSta has implemented a 'spying' function which makes it possible to spy on the activity of the comm ports. By patching the entry points of some communication related function calls with pieces of code that directs the program flow into MODEMSTA.EXE, the stream of data to and from the comm ports can be studied before it is sent to the port or to the communication program.
The technique is described in Microsoft Systems Journal, Jan 1994, pp. 45-74, and will work with Windows 3.1 and Win95 (16 bit programs), but not with 32 bit programs in Win95.

Spying on Windows DLL is a bit of brain surgery, and there are situations when things can go wrong. To be able to patch the function calls, part of the memory has to be locked (made to stay at a fix position). If ModemSta aborts abnormally while having the spy functions activated - because some error or GPF in the system - the comm functions, and most likely Windows itself, will not work properly. The system then has to be rebooted (just restarting Windows may not be enough) to unlock the memory and restore the code of the comm functions. Also, performance under low memory conditions may be affected somewhat, needing more swapping to the hard disk.

If two copies of ModemSta are run, only the first copy receives the SPY information, even if monitoring is made on different comm ports.

A number of new functions use this spying to further enhance the functionality. The functions have been indicated in the dialogs by the keyword (SPY). When a function is selected, spying is activated and the patch is applied. Patch is removed as soon as when possible, to avoid the risks mentioned above.

Here is a list of the functions using SPY and when the patching is activated:

Name	DCD low	DCD high
Connect Info, ARQ	Active	De-activated 5 seconds after connect
Speed Info	Active	Active
Dial String	Active	De-activated 2 seconds after connect
Transmitted Bytes	Active	Active

◆
Together with DOS communication

Using ModemSta together with DOS comm programs is neither recommended nor especially useful:
* Do not start ModemSta with the **-autocheck** parameter, otherwise the automatic detection of com port will lock already started DOS communication programs.
* If a DOS communication program in a DOS box accesses the com ports, ModemSta will not update the status of the com lights. This limitation is not in itself due to ModemSta, but to the communication drivers in Windows.
* It is not safe to start ModemSta while a DOS comm program is running. A **device contention** is likely to appear which may interrupt Your DOS comm session.

Windows 3.1 (Win3.1) and Windows for Workgroups 3.11 (WfWG) behave differently in these critical situations, Win3.1 is a little bit nicer, while WfWG more often hangs the computer.

Win95: The alternative use of DOS and Windows communication programs is somewhat better managed (the device contention). However, the hardware access of ModemSta for detection of some status signals before a connection is made, is not well handled by Win95, resulting in a BUSY status of the comm port until Win95 is restarted.
Use the **No Direct Hardware Access** option on the **General Options**... Dialog to solve the contention.

◆
ModemSta and Win95

The Status Info (baud rate etc.) and the SPY functions (Connect String, TD/RD rate, dialed telephone number) have not yet been implemented for 32 bit comm programs in Win95.
In each Dialog, functions not implemented for 32 bit comm programs are indicated with *.

The file modemsta.vxd is required for TD/RD detection. It has so far been tested with Win95 Dialer SLIP and PPP, Works95 and Hyperterminal. It has still problems in detecting some RD when the Win95 dialer is talking to the PPP socket, but not when data is transferred. An update will probably follow, watch the Home Page (http://pobox.com/~teddyware) for more info.

◆
Colors

ModemSta will only use the 20 available system colors in 256 color mode. No dithering.

◆
Computer hangs or reboots during data transfer

When using the **Fast Data** option, computer may hang or reboot.
This a known problem, Microsofts KB-article Q101420:

Using EnableCommNotification() to enable WM_COMMNOTIFY messages for CN_RECEIVE or CN_TRANSMIT events can cause spurious WM_COMMNOTIFY messages. At higher baud rates, this problem can cause a system to crash and reboot. WM_COMMNOTIFY messages are received with a 0 (zero) value for the NotifyStatus parameter. The system crashes and reboots while receiving or transmitting data.
The solution if You encounter this problem is to **SWITCH OFF** the **Fast Data** option. The problem is related to the comm-driver, so using another comm driver may also help curing the problem.

◆
Microsoft Remote Access will not dial

The detection of TD/RD can interfere with Microsoft Remote Access dialer (rasstart.exe) so that the dialer will not complete the dialing process. Turn the **Fast Data** option on or temporarily change ModemStas **Monitor Port** setting to 0.

◆
Win95: Com port active by another telephony appl. or not supported

The Netscape and Shiva Dialers may complain that the com port is already busy. The same appears to happen with some recent version of Lotus Notes.
The hardware access of ModemSta for detection of some status signals before a connection is made, is not well handled by Win95, resulting in a BUSY status of the comm port until Win95 restarted.
Use the **No Direct Hardware Access** option on the **General Options...** Dialog to solve the problem and re-start Win95 is necessary.

◆
Pentium + WfWG3.11 problems

If You are using Windows for Workgroups, there is an updated serial driver. Here is part of the text from MS Knowledge Base:

```
Microsoft has an Application Note, "WG1001: Updated SERIAL.386 Driver
for Windows for Workgroups.

When you use Windows for Workgroups version 3.11 with serial
communications software, you may experience the following problems:

 - If you are using a Pentium-based machine with a 16550 UART chip,
   your system stops responding (hangs) if there is data in the chip
   when the serial communications application attempts to open the
   communications port.

 - When you are using communications software, you may be able to make
   one connection after starting Windows for Workgroups, but any
   subsequent connections fail and may hang your system.
```

You can get the new driver (wg1001.exe) from Microsofts different DL services and via ftp to www. microsoft.com.

◆
Trumpet Winsock script can hang

Some of the rarely used commands in dialing scripts can interfere with ModemSta and cause the script to hang (not able to continue). The wait <timeout> [dsr | cts | dcd | rlsd] has been identified as one source of troubles.
One solution may be to start ModemSta after a dial or a connection has been made, using Trumpets exec command, see Trumpets on-line manual. (You can also automatically stop ModemSta using the AutoExit after Disconnect.) Another solution may be to avoid using the wait command in the log-in script.
The **No Direct Hardware Access** option on the **General Options**... Dialog may also solve the problem. Activate it and re-start if You are running Win95.

OS/2 Warp (Win-OS/2)

ModemSta works for Windows comm programs in OS/2 with the following comments: ModemSta can not detect ports that are controlled by OS/2. Moving ModemSta or moving other windows over ModemSta may cause display update problems of ModemSta. The automatic detection of available COM and LPT ports may be erroneous.

Usenet modem and communication software discussions

The **comp.dcom.modems** usenet group is a very good place for hardware & software discussions on modems and data communication using modems. Recommended!

About the program

ModemSta was written using Borland's Turbo Pascal for Windows (TPW) version 1.5 and Borland's Resource Workshop version 4.5. The Help-file was written using Word 7.

ModemSta is distributed as **shareware**, which means that if You like it and continue to use it, You must register. Read more in the How to Register section.

The author can be contacted in the following ways:

Internet: **teddyware@pobox.com**
CompuServe: **[100257,2662]**
Home Page **http://pobox.com/~teddyware**
Mail: **TeddyWare, Ted Johansson, Sveavägen 66,**
      S-182 62 DJURSHOLM, SWEDEN.

Postgiro: The account # is **133 54 09-7**.
(The Nordic countries)

At the Home Page (http://pobox.com/~teddyware), You can find the **latest information on ModemSta** and links **for downloading the latest version** via ftp. You can also **order ModemSta** from PsL using WWW (Netscape, Internet Explorer etc.) and Your credit card!

TeddyWare is a member of the Association of Shareware Professionals (ASP). ASP wants to make sure that the shareware principle works for you. If you are unable to resolve a shareware-related problem with an ASP member by contacting the member directly, ASP may be able to help. The ASP Ombudsman can help you resolve a dispute or problem with an ASP member, but does not provide technical support for members' products. Please write to the ASP Ombudsman at 545 Grover Road, Muskegon, MI 49442-9427 USA, FAX 616-788-2765 or send a CompuServe message via CompuServe Mail to ASP Ombudsman 70007,3536 (Internet: 70007.3536@compuserve.com).

License for Use and Distribution:

Evaluation and Registration

This is not free software. You are hereby licensed to use this software for evaluation purposes without charge for a period of 30 days. If you use this software after the 30 day evaluation period a registration fee of $15 is required. Payment can be made using credit cards, cash, CompuServe's GO SWREG or contacting our Shareware registration sites. Details are given below.
When payment is received you will be sent a registration code. You can also order a 3.5" disk with the latest version of ModemSta if You add $5 to Your registration fee. Your registration

will be valid for all future version of ModemSta. You will get support if You have problems with ModemSta (email or surface mail). If You include an Internet, CompuServe address with the registration, You will be informed about new versions and uploads of ModemSta. Finally, no more Registration Reminder!

One registered copy of ModemSta may either be used by a single person who uses the software personally on one or more computers, or installed on a single workstation used nonsimultaneously by multiple people, but not both.

Unregistered use of ModemSta after the 30-day evaluation period is in violation of international copyright laws.

Distribution

Permission is granted to individuals charging no fees, and to BBSs, User Groups, Mail-Order Disk Vendors, CD-ROM publishers, and BBS File-Distribution Networks regardless of fees, to distribute ModemSta, provided they convey a complete and unaltered copy of the shareware version of this product, and provided they claim no ownership of these products.

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THIS SOFTWARE AND THE ACCOMPANYING FILES ARE SOLD "AS IS" AND WITHOUT WARRANTIES AS TO PERFORMANCE OF MERCHANTABILITY OR ANY OTHER WARRANTIES WHETHER EXPRESSED OR IMPLIED.
THE INCLUDED FILES PROVIDE ALL THE CAPABILITIES NECESSARY FOR THE USER TO VERIFY CORRECT FUNCTIONING OF MODEMSTA FOR HIS/HER PURPOSES.
NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS OFFERED. ANY LIABILITY OF THE SELLER WILL BE LIMITED EXCLUSIVELY TO PRODUCT REPLACEMENT OR REFUND OF PURCHASE PRICE.

How to Register

ModemSta is distributed as shareware.   It is not free!   You may use it for 30 days before registering. Registration costs US $15. Details are given below.

A registration number which personalize Your copy will be sent to You. The registration information will be displayed in the **Setup & About** dialog.

Site licenses are also available.   See below for more information.

Why register?

By registering, you support shareware development and affordable Windows software! Your contribution will help promote future shareware development and the development of future versions of this program. Shareware authors can only afford to spend the time to write these programs if the users register.

And:

* Your registration will be valid for <u>all future version</u> of ModemSta.
* <u>Support</u> if You have problems with ModemSta (email or surface mail).
* If You include an email address with the registration, You will be <u>informed about new versions and uploads</u> of ModemSta.
* No more Registration Reminder! You will also be able to turn off the startup logo/sound.

So, why wait? Register today!

Click below to find out about different registration alternatives:

CASH

CREDIT CARD

COMPUSERVE

Users in Scandinavia

Registration Site: AUSTRALIA (Australia+Pacific/Asian region)

SITE LICENSES

CASH   REGISTRATION

Select "File-Print Topic" from the menu bar to print this form.

Send this form or just write a letter with your name and address (and email address), and say that you are registering ModemSta. **Code will always be shipped by email if an email address is supplied.**

```
                          Registration Form
              (ModemSta version 1.9, valid for ALL future version)

Name: _____

Street: _____

City: _____ State: _____ Zip code: _____

Country: _____

Email address: _____

Where did you get Your copy? _____

_____

Comments: _____

_____

_____

Send it with US $15, SEK 100 or equivalent in Your (hard) currency, in CASH to
the following address:
```

TeddyWare
Ted Johansson
Sveavägen 66
S-182 62 DJURSHOLM
SWEDEN

PLEASE, I CAN NOT ACCEPT PERSONAL CHECKS ON NON-SWEDISH BANKS! SEND CASH USING THIS FORM OR USE THE OTHER METHODS OF PAYMENTS LISTED IN THE HELP FILE!

```
(  )  US $5 (SEK 20 within Sweden) is added for an air mailed 3.5" disk with
the latest version of the program.
```

CREDIT CARD ORDERS ONLY

You can order with MC, Visa, Amex, or Discover from Public (software) Library by calling 800-2424-PsL or 713-524-6394 or by FAX to 713-524-6398 or by CIS Email to 71355,470. You can also mail credit card orders to PsL at P.O. Box 35705, Houston, TX 77235-5705 (USA). PsL Product Number #11819.

THE ABOVE NUMBERS ARE FOR CREDIT CARD ORDERS ONLY.
THE AUTHOR OF THIS PROGRAM CANNOT BE REACHED AT THESE NUMBERS.

> **Any questions about the status of the shipment of the order, refunds, registration options, product details, technical support, volume discounts, dealer pricing, site licenses, non-credit card orders, etc., *must be directed to the* <u>Author</u>.**

There are two alternatives: **Registration code only: US $15**
                             Registration code + air mailed 3.5´´ disk : US $20

To insure that you get the latest version, PsL will notify us the day of your order and we will ship the code/product directly to you.

Code will always be shipped by email if an email address is supplied.

Now You can order ModemSta from PsL using WWW (Netscape/Internet Explorer etc.) and Your credit card. Go to the ModemSta Home Page (http://pobox.com/~teddyware) and follow the links to order from PsL.

REGISTRATION THROUGH COMPUSERVE

If You are using CompuServe, you may register ModemSta and charge it to your CompuServe account.

Sign-on to CompuServe, and **GO SWREG**   (Shareware Registration) .
Select **Register Shareware** from the main SWREG Menu.
Select **Registration ID** from the SEARCH BY menu.

- If You want a **Registration code only ($15)**, enter **4609** as the ID.
- If You want a **Registration code + air mailed 3.5´´ disk** with latest version of the program **($20)**, enter **4729** as the ID.

The ModemSta description should be on the screen. Enter **Y to register**.

A notification is automatically sent to our CompuServe account. We will ship code and additional information to Your CompuServe account. If You prefer using another email address for future information, please send an additional note to CIS:[100257,2662] or teddyware@pobox.com.

USERS IN SCANDINAVIA

Simplest is sending **cash** in Your currency or SEK.

You can also register by using **POSTGIRO** and pay directly in Swedish Kronor (SEK 100 for registration code + SEK 20 if You want a disk with the latest version). The Postgiro account # is 133 54 09-7. Please write Your address details + email address on the form (see **CASH REGISTRATION**).

Code will always be shipped by email if an email address is supplied.

REGISTRATIONS IN AUSTRALIA and Pacific/Asian region:

Select "File-Print Topic" from the menu bar to print this form.

For users within **Australia**: The price is $AUS23 (+ $AUS5 for a disk mailed to you).

For users in the **Pacific/Asian region**: Payment from the whole of the Pacific/Asian region is accepted. The payment has to be in Australian dollars or else add an extra $AUS6 to cover conversion costs.

Use this form or just write a letter with your name and address (and email address), and say that you are registering ModemSta.

```
                        Registration Form
             (ModemSta version 1.9, valid for ALL future version)

Name: _____

Address: _____

_____

_____

Email address: _____

Where did you get Your copy? _____

_____

Comments: _____

_____

_____


(  )  $AUS5 is added for a mailed 3.5" disk with the latest version of the
program.
```

Please forward a check or money order for $AUS23 (+ $AUS5 for a disk to mailed to you) to:

> DP Computing
> PO Box 712
> Noarlunga Centre SA 5168
> Australia
>
> Phone: 08 326 4364
> Mobile: 015 973 503
> Email: dpc@mep.com *or* dpc@adam.com.au

DP Computing will ship code to You and handle disks.
Support and other questions concerning **ModemSta** shall be directed to the Author.

SITE LICENSES

By purchasing a multi-user license, organizations are entitled to copy, install and enter an organization specific registration code for the specified number of copies.

A single point of contact within the organization (e.g. a *SysAdmin*) for shipping, technical support and upgrades, is provided to TeddyWare.

The site license agreement includes the general benefits of ModemSta registration:

* The license will be valid for all future version of ModemSta.
* Support if You have problems with ModemSta (email or surface mail).
* If You include an Internet, CompuServe or FidoNet address with the registration,
   You will be informed about new versions and uploads of ModemSta.
* No more Registration Reminder!

Disk may be purchased at an additional $5 per disk (incl. shipping). The distribution disk may be duplicated for any number of copies.

The price structure offered:

```
            Percent Price per   Savings per
     Units  Disc    Unit        Unit
    ----------------------------------
      1 - 4    0%    15.00        0.00
      5 - 9   25%    11.25        3.75
     10 - 24  50%     7.50        7.50
     25+      75%     3.75       11.25
```

Prices are given in US$. Please contact TeddyWare for details about payment.

Acknowledgments

Thanks for all comments and suggestions! Some developers say that the user inputs made 70% of the improvements of their programs. For ModemSta, it may be even more! If You have any comments, questions and suggestions, please contact the **_Author_**.

The following persons have contributed to certain development problems in ModemSta:

C. A. La Varre, Washington, D.C. (USA) for debugging and comments regarding version 1.2/1.3 of ModemSta.

Zweitze de Vries, Delft University of Technology (The Netherlands), for help and code for version detection using TPW.

Prof. Dr. Hans Schrader, University of Bergen (Norway), for suggestions and enthusiastic evaluation of the new Modem & Courier displays for his external modem.

Tom Ruta (Canada) for the Bitmap in Titlebar idea and for help testing it. Also, for many other ideas, some of them useful, some of them just too crazy.

Bill Marti (USA) for pushing me to add the technique needed to detect connect string, dial string, receive/transmit data rate etc.

Dr. Paul Harder, Houston, Texas (USA) for the tip how to force Hang-up.

Thanks also to a lot of people for testing new features and doing beta testing.

Revision history

Apr. 21, 1996: Version 1.9. Moving in direction Win32.
- Added: No warning when exiting ModemSta.
- Added: Hang-up!
- Added: On-line connect time in display.
- Added: TD/RD detection for 32 bit comm programs in Win95, using a .vxd
- Added: 32 bit thunking to call new Win95/Win32 functions.
- Added: System Tray modem icon for 16 bit programs in Win95.
- Added: No Direct Hardware Access.
- Added: System messagebeep (for computers with built-in speaker only).
- Added: Activity logging: Warning if Inactive + Disconnect if Inactive.
- Added: Confirmation on RI and DCD Log File deletion.
- Added: Total connect time. Reset by SHIFT+Left Click.
- Added: SHIFT+Right Click resets TD/RD log of transmitted bytes.
- Changed: The editor for the RI & DCD logs are now the editor associated with .INI-files in the system.
- Changed: Some detection of local date/time format for the log.
- Changed: Auto-selection of com port at first startup.
- Changed: Moved selection of com port from SYSTEM MENU to Setup & About Dialog.
- Changed: Separate dialogs for Win3 and Win95.m Ctld3d.dll not needed in Win95.
- Changed: Complete re-built the dialog system for all settings.
- Fixed: On-Top disabled when a dialog window is open.
- Fixed: Win95 mouse problem in Comm Port Status display (UART checking caused dizziness of mouse). Skipped the UART detection.
- Fixed: Updated the drawing routines for the 'TD/RD Speed in Display'. Sometimes, part of characters were not completely overwritten.
- Fixed: Display problem when using IBM Thinkpad 355Cs.
- Fixed: Better repaint of TD/RD in Display.
- Fixed: Titlebar not always correctly repainted or deleted when switching between windows.
- Fixed: Path names >50 characters made sounds not play.

Sep. 30, 1995: Version 1.8. SPY.
- Added: SPY functions, to get CONNECT STRING, TD/RD data rate, # of TRANSMITTED BYTES and Dialed Phone number.
- Re-designed Horiz S, Modem and Courier display to present the new information.
- Added: Negotiation Delay for more accurate CD logging.
- Added: Connect Time in Titlebar.
- Added: Confirm Exit if connected.
- Added: Titlebar bitmap versions of the Modem and Courier displays.
- Changed: Details of TD/RD monitoring, because of interference with Microsofts Remote Access.
- Changed: No repaint of whole screen at start-up when Startup Logo is switched off. ChildWindow for Startup Logo.
- Changed: Each new entry in the Log file now starts on a new line, even if connection was lost.
- Changed: -nocheck is now default. Use parameter -autocheck for port detection.
- Fixed: AutoExit Delay >32 s did not work (wrong integer type).
- Tested and updated for Win95.

Apr. 25, 1995: Version 1.7. Fixes and new ideas.
- Added: Right mouse click on ModemSta to directly bring up the SetupAbout screen.
- Added. Additional Titlebar display in active window. AutoSense activation.
- Added: 3d effects (selectable) added to all displays.
- Added: Context sensitive HELP to all dialogs.

- Added: Auto Exit feature when connection ends, with delay.
- Changed: Divided Setup & About into several dialogs.
- Changed: Format of MODEMSTA.RI and MODEMSTA.DCD changed to one single line per entry and US date format, to ease importing data into spreadsheets.
- Fixed: Could not change Background, Text and LampOff Colors using high resolutions and many colors.
- Fixed: ModemSta & Windows hung when repeatedly changing colors (a handle was not released).
- Fixed: Command line parameters can be given more freely, the order is no longer important, lower/upper case bug fixed.
- Fixed: Better RD/TD detection when using Fast Data.
- Fixed: Runtime Error 200 (division by zero) sometimes occurred at startup with Comm Status in Title set.
- Fixed: Each new connection log entry starts at a new line, even if connection or program was interrupted.

Feb. 15, 1995: Version 1.6. Does it ever stop?
- Added new displays Modem and Courier and detection of some new signals.
- Changed: Minor changes in all displays.
- Added: Two different lamp looks: flat and round.
- Added: Detection and display of parallel ports.
- Added: Fast display option for RD/TD/SD signals.
- Extended: Update rate can now be 0, no updates. Update Lamps Now! allows manual updates.
- Changed: Due to tighter connection with the BIOS/DOS data, only COM1-4 and LPT1-3 is now allowed.
- Changed: The display is only redrawn when a comm event has occurred.
- Changed: When using -nocheck, Port Status Info in the Windows frame is not detected.
- Changed: When using -nocheck, COM1-4 and LPT1-3 will be available on the SYSTEM MENU.
- Changed: When using 256 colors or less, the ChooseColor dialog box now contains fewer colors.
- Changed: TimeOut for Auto Detect on Top no longer on SetupAbout dialog.
- Changed: SetupAbout Dialog opens on fixed position in upper-left corner of screen.
- Fixed: if COMxFIFO returns YES,TRUE etc., this is detected and converted to 1 or 0.

Dec. 18, 1994. Version 1.5. More features.
- Added Double-click to toggle caption bar on/off.
- Added Horizontal Small view.
- Added user selectable colors for LampOn, LampOff, Text and Background.
- Changed RGB color scroll to CommDlg color selection.
- Select sounds from any directory. Test sound while browsing.
- Added sound event connected to Connect/Disconnect.
- Added startup bitmap and sound.
- Added installation program to copy files and add Progman group.
- Detection of high baud rates fixed.
- Extended: WfWG can now detect status of port that is not open.
- Extended: Ring Indication without opening the port. QuasiModem not longer needed.

Sep. 19, 1994: Version 1.4s. Swedish language version of Version 1.4.
- No changes in the code, except language.

Sep. 11, 1994: Version 1.4. Update.
- Minor bug fixes.
- New layout of   Setup & About dialog.

- Updated HELP-file.

Jun. 14, 1994: Version 1.3. Even more features...
- Added: Ability to show (edit) and delete RI and DCD-log files.
- Moved log files to local directory. QuasiModem now has its own RI-log file.
- Fixed: WfWG not detecting COM4.
- Fixed: 1024x786, Large font display, causes ModemSta's y-coordinate to change during update.

Jun. 8, 1994: Version 1.2. Lot of new features!
- Added: RI and DCD activity logging. 3D-look using ctl3d.dll (must be distributed together with ModemSta). Shareware info & registration. Help file, Help button in the Setup & About dialog and F1 triggering in the dialog. Ability to handle several instances. Adjustable timer interval for updating the lamp status.
- Fixed: Lamp color problems using 256 colors or more. Still only 20 colors available in 256 color mode.
- Fixed: Now compatible with Windows for Workgroups 3.11.

Feb. 13, 1994: Version 1.1. Limited public release.
- Added: COMx (x=1..GetMaxCOM) can be used. Only ports active at start-up shown on menu. New Setup & About dialog. Modem initialization functions. User selectable lamp color. RI activity => play .wav-sound file from the windows directory. Port info in the title bar.
- Changed: No need to maximize icon when finding/saving start-up position at program end.
- Fixed: Misplacement in the position saved in the .ini file (x+1,y+2).
- Fixed: Fooled halt of ModemSta when Windows not closing.

Dec. 21, 1993: Version 1.0. First release.

AA =Auto Answer.
The Auto Answer mode of a modem can not be detected by ModemSta.
However, this signal is also used for the Ring Indicator <u>RI</u> when using the **Modem** and **Courier** views.

ARQ = Error Control/Fax Operations.
The signal indicates that an error control connection has been made. The modem signal is detected by ModemSta if **Connect String in Display** or **Connect String in Title** is activated and ARQ is detected in the connect string.
The Fax Operation is not detected by ModemSta.

CTS = Clear To Send, also **CS.**
This signal indicates that the modem is ready to accept data from the computer.

DCD = Data Carrier Detect, also **CD (Carrier Detect)** or **RLSD (Receive Line Signal Detect).**
Indicates that a signal carrier has been detected, which usually means that the modem is connected to another modem.
Some modems need to be given the command AT&C1 or change a hardware switch to not show this signal continuously ON.

DSR = Data Set Ready, also **MR (Modem Ready).**
Indicates that the modem is active and waiting instructions.

HS = High Speed.
This signal is used to show the speed between the <u>modem</u> and the <u>computer</u>.
ModemSta turns **HS ON** for speed settings **higher than 9600 bps**. Remains on until next connect.

OH = Off Hook.
This modem signal can not be detected by ModemSta.

RD = Receive data.
Data is being received to the computer from the modem.

RI = Ring Indicator.
This signal indicates an incoming call. It is an hardware equivalent of the Hayes modem's RING message. On the **Modem** and **Courier** View, <u>AA</u> is used for this signal.

RTS = Request to Send, also **RS.**
Detects the status of the RTS signal. Some modems need to be given the command AT&R2 or change a hardware switch to not show this signal continuously ON.

TD = Transmit data, also **SD (Send Data).**
Data is being transmitted from the computer to the modem.

DTR = Data Terminal Ready, also **TR (Terminal Ready).**
Detects the status of the DTR signal.
Some modems need to change a hardware switch to not show this signal continuously ON.

The directory where the Windows files reside, e.g. **C:\WINDOWS**

The directory where the Windows system files reside, e.g. **C:\WINDOWS\SYSTEM**