



Help Index for ModemSta

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

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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.

New in version 1.8 is a **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 (in Win95, this works for 16 bit communication programs only).

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 SetupAbout 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.

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

* **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** (SPY). 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.



Communication and debugging functions

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

* Display additional **comm 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 comm 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.

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.

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. 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 pathname, 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

The settings can be made from the Setup & About Dialog, the General Options button, the Layout & Sounds button and the Loggings button.



Basics

You can **go directly** to the SetupAbout dialog by **right-clicking** on ModemSta's 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.

Also, in each Dialog, functions not fully Win95 compatible have been indicated with *, functions not compatible with 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. The system menu will show COM1-4 and LPT1-3. Only ports available in the system can be switched to.

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 SYSTEMS MENU, 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



[Orientation](#)

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

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

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 is the same for all COM ports views, including the Modem and Courier views.

If SPY on CONNECT STRING or SPY on TD/RD Speed is activated, the **Horiz S**, **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 (SPY) to show the full connect string in the icons title.



[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 2. Use with care on slower CPUs.

The **Fast Data** option (serial ports only) 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. Use with care on slower CPUs.

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 with maximum speed.



[Lamp look](#)



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



[Additional Titlebar Display](#)

This puts an additional display with rectangular lights in the **title bar** of the active window.

AutoSense will automatically switch the Titlebar Display feature on/off when a connection is detected (DCD/CD goes high/low).

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



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.

General Options Dialog



[No Startup Logo](#)

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



[Smart Updates](#)

ModemSta redraws its window only **when status lamps have changed**.

However, if You in any situation would encounter a problem with this, this feature can be switch off.

ModemSta will then redraws its display each time the port is monitored (as was done prior to version 1.6).

See the [Comments and limitations](#) section.



[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.



[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.

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.

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 SPY FUNCTIONS below.



[Connect Time in Titlebar Display](#)

Toggle the **Connect Time in Titlebar Display** checkbox on/off (serial ports only) to additionally display the connect time when the Titlebar Display is active. The **Negotiation Delay** 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**.



[Stay On Top](#)

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

Select **Auto detect** (serial ports only) to activate ModemSta's 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.

Select **No** to deselect any On Top features.

[SPY functions:](#)



[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 (*DCD/CD high*). The Modem, Courier and Horiz S 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 (*ARQ* 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 [Windows](#) 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.

See the [Comments and limitations](#) section for a discussion about the SPY functions and their limitations.



[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 $\neq 0$. The values are in CPS (char/sec).

The **TD/RD Speed** info is shown during the **Speed Update** interval. The Modem, Courier and Horiz S 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.

See the [Comments and limitations](#) section for a detailed discussion about the SPY functions and their limitations.



[Speed update](#)

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

Layout & Sounds Dialog



[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.

If You are running Win95, there is no icon on the desktop any more, and the 3D effects of the **Icon** can not be set.



[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.



[Sounds](#)

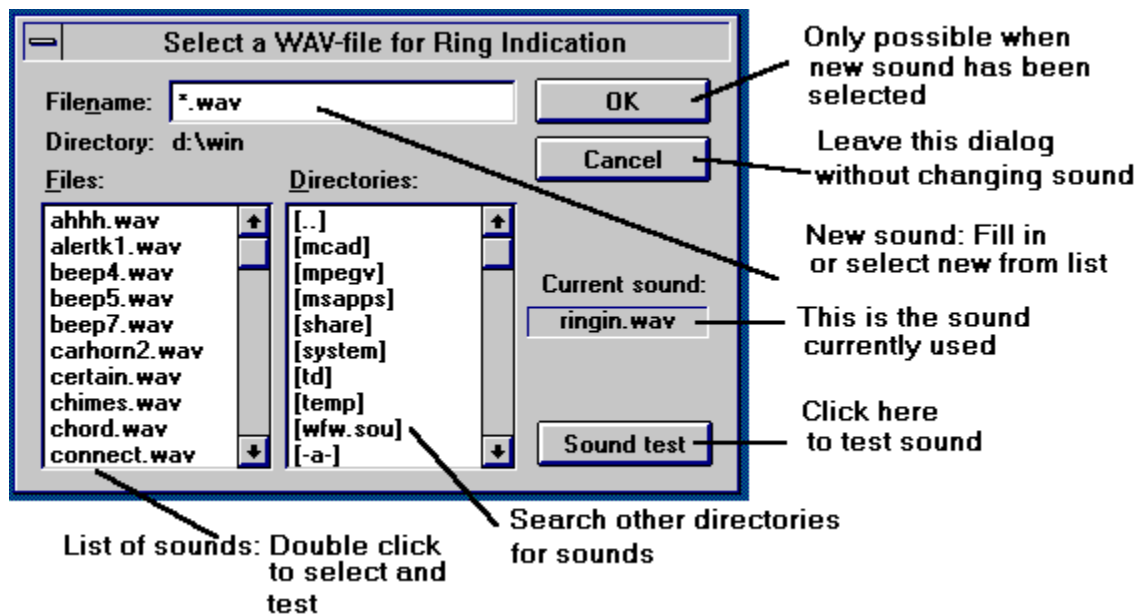
Toggle the **Incoming Call (RI)** checkbox on/off (serial ports only) if You want ModemSta to play a .wav file when **RI** or **AA** is detected (the telephone rings). Click the **Sound** button to select another sound. A file menu will be presented. You can test the sound while browsing around in different directories.

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.

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.

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

(clicking the  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
```

Date is given in US MM/DD/YY format and time using 24 h format.
The format allows easy pasting into e.g. spreadsheets.

The **Show** button starts Notepad with **modemsta.ri**.

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   Time= 0:01:42
Connected: 4/25/95 19:23:46   Disconnected: 4/24/95 19:24:37   Time= 0:00:49
Connected: 4/25/95 19:25:38   Disconnected: 4/24/95 19:43:38   Time= 0:17:59
Connected: 4/25/95 20:40:41   Disconnected: 4/24/95 20:52:59   Time= 0:12:18
```

Date is given in US MM/DD/YY format, time using 24 h format and connect time in HH:MM:SS.
The format allows easy pasting into e.g. spreadsheets.

The **Show** button starts Notepad with **modemsta.dcd**.

The **Del** button deletes **modemsta.dcd**.



Show Dial String in Log (SPY)

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 the checkbox is grayed.

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

See the Comments and limitations section for at detailed discussion about the **SPY functions** and their

limitations.

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 Number of Transmitted Bytes in Log (SPY)

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.

See the Comments and limitations section for at detailed discussion about the **SPY functions** and their limitations.

Comm Port Summary

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:

Total number of comm ports according to DOS

True Windows version #

Name and version # of comm driver

Total number of parallel ports according to DOS

Summary of Communication Ports and Settings

DOS version : 6.22 Windows version : 3.11 ComIrqSharing : No
Comm Ports : 3 CommDriver : comm.drv ver. 3.11 Parallel Ports : 1

DOS		Windows										system.ini settings						
COM Port	Chip	COM	IRQ	CTS	RI	DCD	DSR	D	P	Stop	Baud	Base	IRQ	FIFO	D	P	Stop	Baud
1	03F8	1	4									03F8	-	-	8	N	1	19200
2	02F8 16550A	2	3	*	-	-	*	7	E	1	9600	02F8	-	1	8	N	1	9600
3	02E8 16450	3										-	-		8	N	1	9600
4		4	3	-	-	-	-	7	E	1	9600	02E8	3	-	8	N	1	19200

ModemSta : COM2 **Edit SYSTEM files** **Update** **HELP** **OK**

Always in sequence, no "holes" allowed!

UART of ports available to Windows

Actual status shown here

Inspect and change DOS and Windows settings

Check that FIFO is activated for high-speed ports!

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.



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.



[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](#)

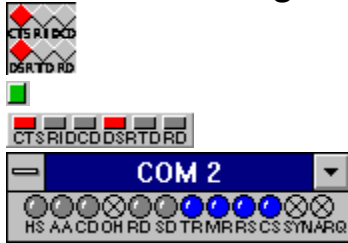
This section lists the communication parameters settings from the [system.ini](#) file in the [Windows](#) directory. Most of this information is also available from the **Ports** icon in the **Control Panel**.

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...).

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

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.

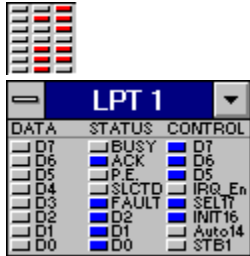
RS = Request to Send, also **RTS**. Detects the status of the RTS signal. Some modems need to be given the command AT&R2 or change a hardware switch to not show this signal continuously ON.

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 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-programs in Win95 or WinNT.

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) behaves differently in these critical situations, Win3.1 is a little bit nicer, while WfWG more often hangs the computer.



[ModemSta and Win95](#)

ModemSta has been tested with Win95.

The following features of ModemSta have problems with 32 bit comm programs and will eventually be updated:

- * TD/RD info, used for the TD and RD lamps.
- * The Status Info (baud rate etc.).
- * The SPY functions (Connect String, TD/RD rate, dialed telephone number).

Also, in each Dialog, functions not fully Win95 compatible have been indicated with *, functions not compatible with 32 bit comm programs are indicated with **.



[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.



[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 is 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.



[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.



[Usenet modem and communication software discussions](#)

The **comp.dcom.modems** 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 1.02/version 4.5. The Help-file was written using Word 6.

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:

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CompuServe: [100257,2662]
Mail: TeddyWare, Ted Johansson, Sveavägen 66,
S-182 62 DJURSHOLM, SWEDEN.

[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.

Distribution by other channels, and distribution of modified versions, are also allowed, but only under the terms of the attached VENDINFO data record. Any distribution satisfying all the distribution requirements expressed in that data record is hereby authorized.

The attached VENDINFO data record is hereby incorporated by reference. Any distribution satisfying all the distribution requirements expressed in that data record is hereby authorized.

Disclaimer of Warranty

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

So, why wait? Register today!

Click below to find out about different registration alternatives:



CASH



CREDIT CARD



COMPUSERVE



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

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 (incl. shipping). The distribution disk may be duplicated for any number of copies.

The price structure offered:

Units	Percent Disc	Price per Unit	Savings per Unit

1 - 4	0%	15.00	0.00
5 - 9	25%	11.25	3.75
10 - 24	35%	9.75	5.25
25 - 49	40%	9.00	6.00
50 - 99	45%	8.25	6.75
100+	50%	7.50	7.50

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



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 a valid email address is supplied.**

Registration Form

(ModemSta version 1.8, 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 (no checks, please!) to the following address:

TeddyWare
Ted Johansson
Sveavägen 66
S-182 62 DJURSHOLM
SWEDEN

() 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 Author.***

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 a valid email address is supplied.



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.

ModemSta's 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.



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 1.8, 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.

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.

Gian Donato "Dado" Colussi, University of Helsinki (Finland), for the code to determine UART.

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.

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

Revision history

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 RI 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 modem and the computer.

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, AA 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**

