

**NOTICE: If you are using Dashboard, or another replacement for Windows 3.1 Program manager, it may be necessary to install COMit from the Program manager.**

**If your modem supports the Rockwell V.42 (Software) Driver...  
and you did not set the following when installing COMit, you should...**

- 1) Select "Port" from the settings menu and enable the V.42 settings. There are three: Enable V.42, Error Correction, and Data Compression.**
- 2) Select "Modems" from the setting menu and select the first modem in the list "1-Modems supporting V.42"**
- 3) Now, push the test button. If you have set up COMit correctly, you will get an "OK" message. If you get a error message your modem may not support the Soft V.42. Please see your modem manual.**

**NOTE: Do not select the V.42 Softdriver (RPI) if your modem supports MNP and V.42 bis in hardware. Please see your modem manual.**

### **IMPORTANT NOTE:**

**If you are using Windows 3.1, we strongly suggest you run the program "MSD" (switch to the Windows directory and from the DOS prompt type "MSD") prior to installing or running your modem. Problems encountered using modems are most often related to conflicts of ports, speed, and IRQs. MSD will help you locate these problems and assist in the installation of your modem and COMit. If you experience problems under Windows 3.0 because of port or speed conflicts, you may want to consider upgrading to Windows version 3.1.**

### **Common Problems**

Data Communications is a very inexact field and is prone to an inordinate number of problems. By alleviating some of the common problems reported with COMit we hope to make your lives a bit easier.

Modem does not work when port speed is set to 14400 - This is probably the most common problem reported. And the answer is simple, at least from the COMit standpoint. Do not set your port speed to 14400. Set COMit to 19,200. If you have a 16550 UART then you can set your port speed to 38400. In Windows the standard COM driver does not work well above 38400 and Receive Overruns will occur. If you do not have a 16550 UART or do not know what you have then set your port speed to 19200. You can use the Microsoft utility MSD.EXE included with your Windows system to determine the type of UART you have. The common ones are 8250, 16450, or 16550 so look for these numbers under the COM port section.

Receive Overruns are Occurring - This is the next most common problem that is reported. This is not as easy as the previous problem. The first thing is to read the previous problem on port speed settings.

You should be using Hardware Flow Control for all DATA communications over 2400 BPS or if you have V42 or MNP enabled in a slower modem. In COMit it is listed as Hardware Flow Control. or RTS/CTS).

The Flow Control in the Modem is a lot more difficult because it turns out that there are numerous modems which implement the Flow Control command differently. Which means if your modem is not in the list then the chances are that your modem selection may not be correct.

When this occurs you can experiment with a different modem until you find one that works.

Certain Modems do not handle the speed we initialize them at effectively. They have a tendency to drop off commands at the end of the Command string (Usually the flow control setting). To overcome this problem we have a parameter called XMIT Delay in the Settings/Modem Dialog Box. Place a value of 1 in this box and the initialization and command sequence may slow down enough to satisfy your modem.

One additional instance occurs when you are dialing into COMit Host Mode or AutoAnswer Mode with a modem which does not have a V42 or MNP capabilities and the dialing modem is setup for V42 or MNP. The V42 and MNP sequences are actually data that is transmitted after a carrier/Connect sequence has take place. To a modem which does not support V42 or MNP this data looks like garbage and may result in Receive overruns or some other odd messages. The best thing to do in this situation is have the party dialing into COMit disable the MNP or V42 support for the duration of the call. Usually the negotiation of the V42 and MNP lasts about 1-3 seconds immediately after the first connect/carrier message.

\*VT100 & ANSI Keyboard does not set Home, PGUP, Up Arrow, Etc Keys - The normal state for the control keys such as HOME, Up Arrow, Page UP, etc is to manipulate the screen buffer. If you desire to transmit the sequences to the service you are connected to **you must toggle the "Scroll Lock key to the ON position.**

Screen Paints are Choppy - If you are comparing Windows to DOS programs you will find the screen paints are slower and choppier with slower MicroComputers. This is because the Graphical Interface is much slower and has a more difficult time handling the Scrolling process without playing tricks in the repaint routines.

Screen Paints are aligned incorrectly - This is usually the result of the Terminal Number of Rows are out of Sync with the number of Rows on the service that you are using. If the number of rows on the BBS service you are using are set to 25 then make sure the setting in the Settings/Terminal Dialog Box is also 25. Usually there is a menu item on the service you are using for your settings or parameters.

Modem Initialization Error - This error is usually the result of an mismatch in our modem string and the Modem you are using. You can try selecting another modem in the list and experimenting with this. Also **if you have added any modem init strings to the Settings/Modem Dialog Box take them out.**

ANSI Graphic Characters are not displayed Properly - If those special characters used to jazz up the displays on BBS's are not displaying properly, this is usually a result of the FONT selection. The only Font distributed with Windows that supports these characters is the Terminal FONT. Therefore if you select any other standard Windows Font you will not see these nice menus and pictures. **Please note that the Terminal Font is not a True Type Font, if you have the True Type ONLY enabled in the Window Control Panel Font Selection then you will not see the Terminal Font.**

Also note that only Fixed Space fonts are supported for efficiency. To properly space Proportional Fonts (Which most fonts unfortunately are) it becomes inefficient in a Windows Communications Environment.

## ERRATIC RESPONSE TO COMMANDS

Erratic response to AT commands can be attributed to two things: IRQ conflicts and/or COM port overlaps.

First ensure that no other devices are using the same IRQ as the modem. Modems use IRQs to signal the computer that data has been received or sent. For an internal modem, make sure that the COM port it's set to does not conflict with a COM port already in the system (whether used or not). When in doubt, try another COM port setting.

Port	I/O	IRQ
COM1	3F8	4
COM2	2F8	3
COM3	3E8	4
COM4	2E8	3

For instance, consider a situation where you add an internal modem to a system which has COM1 and COM2 built in. There's a mouse on COM1 and nothing on COM2. You must either:

- \_ Disable the built-in COM2 and address the modem as COM2 (preferred)
- \_ Leave the mouse on COM1 and address the modem as COM4
- \_ Move the mouse to COM2 and address the modem as COM3

### IRQS, I/O ADDRESSES, AND COM PORTS

The most common problem users encounter when using a data modem is an IRQ conflict. But just what is an IRQ and why do conflicts arise? If you know the answer, skip to the next section. If you don't, read on.

The microprocessor in your computer works on only one task at a time. When a device (such as your modem) needs the processor to do some work, the device sends an interrupt request (IRQ) to get the processor's attention and an instruction telling the processor what to do. When the processor receives an interrupt request, it puts down the task it was working on, executes the new instruction, then goes back to the original task.

Most add-in devices don't like to share. So when you have two devices using the same IRQ, one or the other (or both) of the devices may not operate reliably. The only way to ensure reliable operation of your add-in device is to give the device its own IRQ.

In addition to the IRQ, a data modem also needs a unique I/O address. The I/O address is simply a path for the data to flow in and out of the computer. Having two devices at the same I/O address yields results similar to the IRQ conflict: the device doesn't work reliably.

Many of the devices you can install in your computer require an IRQ, but there are very few IRQs to go around. Your task is to configure every device you add to your computer so that it has a unique IRQ and a unique I/O address. The more devices you add, the trickier this job can be.

The best way to avoid a conflict is to know the I/O address and/or IRQ used by every device in your computer before adding a new device. Examine each board, read the manuals, or call your dealer or the manufacturer to determine the current settings for each board. Also determine your options for reconfiguring the boards (if necessary) to avoid annoying conflicts.

If you configure your modem for COM3 IRQ5 and plan to use Windows communications software, you must configure the COM3 port in the Windows Control Panel. After opening the Control Panel, select "Ports". Next, select "COM3" then select the "Advanced" button. Change the "Interrupt request line" to 5.

#### Using COM4.

Use the Control Panel Ports Advanced dialog to make sure that Windows knows the correct port address value and IRQ settings for your COM4 port. The address for COM4 is not usually specified in the BIOS data area of most PCs, since it is not a standard port.

Many serial adapters use a COM4 default base address of 02E8. Unfortunately, this address value conflicts with some peripherals, including 8514/A video adapters and certain network adapters. To work around this problem, reconfigure one of your peripheral adapters to use a different address. If you change your COM4 address, be sure to use the Control Panel Ports Advanced dialog to reset the address value for COM4. If you do not have a COM3 on your computer and have set the modem to COM4 the comm port may slide over to comm port 3. It may be necessary to add a line in your System.ini as follows "COM3IRQ=-1"

#### HIGH SPEED MODEM CONNECTS ONLY AT 2400 BPS

Many high-speed modems (such as the Hayes V Series or US Robotics HST) support industry standards for speeds up to 2400 bps, but use proprietary standards at 9600 and above. Without V.32 support on these modems, Most High Speed modems connect to them at no greater than 2400 bps.

Other modems (such as the Hayes Ultra 9600 or US Robotics HST Dual Standard) support V.32 in addition to the proprietary standard. With V.32 enabled on these modems, Most High Speed modems can connect to them at 9600 or above bps.

#### CAN'T RECEIVE FROM SOME HIGH-SPEED MODEMS (S7 TOO LOW)

The value of the S7 register, which defines how long the modem waits for a connection with a remote modem, may be set too low. Set the S7 register to a value of 60 or higher (see the online AT command reference manual).

COMit allows you to set this feature without defining it in the S7 register. Go to the Settings menu item and select "Preferences" next change the "Timeout in [ ] Seconds" option.

Setting up modem for IRQs other than 3 and 4

If your internal modem is set for a IRQ other than 3 or 4 it is necessary to go to the Windows control panel and make the changes to define that your comm port is set to IRQ 5.