FREQUENT QUESTIONS AND ANSWERS
COMMWAVE HSP MODEM

Q. What is HSP?

Answer: HSP stands for Host Signal Processing. This refers to using the host computers processor (Pentium chip) in place of a dedicated chip on the modem (DSP) to perform the Digital Signal Processing.

Q. Why do my system slow down when I'm online?

Answer: The description of what Host Signal Processing stands for will give you the best clue.   The digital signal processing that is done by a chip (DSP) on most modems is being done with the computers CPU. This will of course leave less CPU cycles for other running programs.   If you are running a Pentium-166 or faster, the performance loss will not be noticeable to most users. Test results show that as CPU goes higher, the performance loss is lesser.   Generally, CPU higher that Pentium 100 will occupies about 50% CPU resources.   For system lower that Pentium 100, we do not encourage you to use for Internet access because the performance is not acceptable.

Q. Can I upgrade my Modem?

Answer: Yes! This is one of the best features of the software modem. It can be upgraded with software when new features are added, all you need to do is download the updated drivers from our web page and install the new drivers.

Q. Can I upgraded this modem to the new 56K technology in future?

Answer: Yes, we will offer an upgrading program to be announced soon.   Due to this newly introduction of 56kbps standard for modem, and this standard is not officially standardize yet by ITU.   There is two different kind of 56k modem standard. It is now unclear of which standard will be the winning standard in ITU. Getting ITU to recognize the 56K technology standard would not be mature so soon.

Q. I added the modem Port driver to Windows 95, but the 8-bit modem cannot open or use it, what's the problem?

"FOR NON-PNP 8-BIT MODEM ONLY".

Answer: If your modem is the 8-bit non-plug-n-Play model, you are required to install the virtual communication port driver manually. Refer to the user manual or installation guide for properly installation of this modem driver. If your modem still don't work even after proper installation, check the interrupt that is used by this virtual COM port resource. It may have a conflict with other devices.

Q. Why do I have to disable COM 2 to share IRQ for the 8-bit non-Plug and Play modem to work?

"FOR NON-PNP 8-BIT MODEM ONLY".

Answer: Yes. You may have to disable the COM 2 on your motherboard to allow IRQ 3 to be use by this 8-bit modem. If you have the 16-bit Plug and Play HSP modem, this is not an issue to you. An 8-bit ISA card can't access IRQs higher that 7. Most computers have 2 COM ports, a printer, and a sound card. The COM ports take up IRQ 4 and 3. The printer is on IRQ 7 and the sound card is on IRQ 5. By disabling COM 2, we minimize the risk of a conflict. The 8-bit HSP modem will have all this disadvantages but cheaper in cost. In fact, we are emphasizing on more 16-bit Plug-and-play HSP modem cards than the 8-bit modem cards.

Q. Why doesn't Windows 95 diagnose my modem?

Answer: This modem cannot respond to AT commands until the modem virtual driver for Windows 95 is loaded in background.   Since Windows 95 uses the ATi responses to diagnose the modems, diagnostic is not possible because the driver is not loaded or may not be installed properly.   Please Reboot Windows 95 and try the diagnostic again.   If the modem still fails in the diagnostic, you should remove the driver and re-install the modem driver again.

Q. Can I use the HSP modem on a motherboard using a Cyrix CPU instead of a Pentium?

Answer: This product was originally marketed as a product for use in systems with a true Intel Pentium-100 or AMD K5-100Mhz P133 and higher. For Cyrix support, we have released the Cyrix driver that performs well on a Cyrix 6x86 - 120 MHz -P150+. You can download this driver from our Web page. Our test results show that the Cyrix CPU still has acceptable performance although it is claim that the floating-point processor on the Cyrix CPU is much slower than Intel or AMD CPU. This may vary from motherboard to motherboard since not all are created equal. The performance of your HSP modem depends upon the performance of the floating-point function of your processor.

Q. Can I use my modem with operating system other than Windows 95?

Answer: This modem works well in Windows 95. We also have the drivers to support Windows 3.1x and Windows for Workgroup 3.1x. Windows NT 4.0 Driver is still under development.

Q. Can I use my modem under native MSDOS?

Answer: This product was originally designed for Windows only. This product does not work under Native MSDOS environment. MSDOS is not a suitable environment for multi-tasking and Host Signal Processing. Stability of the communication under MSDOS may be an issue. There is some MSDOS software that will work under Windows 95 MSDOS box. It is advise not to use this modem under MSDOS. We are still investigating on the possibility of allowing this modem to support MSDOS properly.

Q. Can I monitor my phone line quality and CPU loading of this modem?

Answer: Yes. A utility found in the modem driver diskette (MEYE.EXE) is provided for you to monitor the phone line quality and CPU loading of this modem. Run this MEYE.EXE while your modem is in connection. S/R represents the signal to noise ratio of the phone line. In an ideal situation, the maximum S/N is 40dB. For 33600 bps connections, you should obtain a S/R of 36dB. For 28800 bps connection, the S/N is about 34dB.

Q. Should I control the amount of CPU cycles that the modem uses to speed up my system?

Answer: We recommend that you never change the CPU loading. The modem driver will automatically optimize the loading. If you have a slow computer (P75) and you do not want to impair the multitasking performance by taking up too many processor cycles, you might wants to change the CPU loading. This modem has an AT command that will control this. Following are the settings:

%N0 Dynamic CPU loading disabled

%N1 Dynamic CPU loading not to exceed 10%

%N2 Dynamic CPU loading not to exceed 20%

%N3 Dynamic CPU loading not to exceed 30%

%N4 Dynamic CPU loading not to exceed 40%

%N5 Dynamic CPU loading not to exceed 50%

%N6 Dynamic CPU loading not to exceed 60%

%N7 Dynamic CPU loading not to exceed 70%

%N8 Dynamic CPU loading not to exceed 80%

%N9 Dynamic CPU loading not to exceed 90%

If you have a fast computer (P133+), you don't need to worry about it. Your CPU has more than enough power to run our modem and many other tasks as well.

Q. My modem connects slower than I expect, what's the problem?

Answer: Probably nothing, the connection rate established has many factors. The speed of a V.34-based modem is dependent on line conditions. With an average line, you should expect speeds of no less than 21.6 Kbps.   If you are unable to reach speeds higher than 24.0 Kbps, it is probably a bad line condition of your countries' telecommunication system.

   There are a number of factors that can limit the top connection speed of your modem.

   1. The remote modem that you are connected does not support the speed you expect.

   2. The line condition does not support it.

   3. The Processor you are using is too slow.   If you use a Pentium CPU slower than 100 Mhz or use a non Intel CPU from Cyrix or AMD slower that our recommended CPU, the connection speed may be limited due to system resources.   MODEM EYE is a bundled utility for Win95/Windows 3.1x to monitor the line condition and CPU loading. For a 28800 bps carrier connects, you need to have a Signal-to-Noise Ratio of minimum 34dB and above. For a 31200 / 33600 bps carrier connects, you need to have at least 36dB.

Q. When I connect to a BBS or online service using this modem, I see gibberish or the connection drops. What could be happening?

Answer: The line condition is so bad for this modem to work. The Processor you are using is too slow.

Q. Which Com Port and IRQ can this modem use?

Answer: Our 16-bit Plug-n-Play modem can support one of the Com ports and IRQs listed:

   a) Com Ports 1, 2, 3, or 4

   b) Interrupt 3,4,5,7,9,10, or 11.

Answer: Our 8-bit Non-Plug-n-Play modem can support one or the following Com ports and IRQs listed:

   a) Com Ports 1, 2, 3, or 4

   c) Interrupt 2,3,4 or 5.

Of course if another device is using the IRQ, it may be unusable.   You cannot disable the unused Com Port to free up extra IRQ in most PC systems from the CMOS settings.   For example if you have a Serial Port set to Com2/IRQ3, this modem can use Com3/IRQ3 provided you disable the Com2 from the System CMOS settings.

Q. I noticed that the ATi response of my modem indicated it was for an Intel Pentium whereas my computer is using a Cyrix or AMD.   Do I need change another driver?

Answer: Yes. Intel Pentium driver is only optimize for Intel Pentium.   You should download the Non-Pentium driver and upgrade it.

   The rule is:

   If you have the Intel MMX Pentium CPU, use the Intel MMX Pentium Driver.

   If you have the Intel or AMD Pentium CPU, use the Intel/AMD Pentium Driver.

   If you have the Cyrix CPU, use the Cyrix Driver.

Q. When I move the scroll bar, the modem tends to disconnect automatically?

Answer: You may have a computer with the VGA display card using S3 video chip. The S3 video drivers added a "BUSthrottle" entry to the [Display] section of the SYSTEM.INI, which must be reduced to a value of 1. Changing this value will not have any impact on the display card's performance.

Q. Does the Cheyenne Bitware software that comes with the CommWave modem provide Voice-On-Demand and Voice Broadcasting?

Answer: The Software with this enhanced feature is the Bitware Plus for Windows. This can be purchase from Cheyenne Communications USA. Check out http://www.cheyenne.com Please note that your Bitware version from this modem package is the Bitware Lite F/D/V for Windows.

Q. Can Carbon Copy for Windows v2.5 works with this modem?

Answer: This modem has some compatibility issues with Carbon Copy for Windows v2.5. For this modem to work, you must remove the MCVCOMM.386 virtual device driver from the [386Enh] section of the SYSTEM.INI file. (Please note that MCVCOMM.386 is automatically installed when you install the Carbon Copy for Windows). We are in process of working with MICROCOM to resolve this issue.

Q. Why do I need a full duplex sound card for the "Hands Free" Speakerphone to work?

Answer: For a normal Speakerphone modem, you need to have the audio chip built-in the modem card. Our modem provides speaker phone function without the need to have this audio chip on the modem.   We develop the, "Virtual Speaker Phone", driver that allow you to use the existing full-duplex sound card to give you the same "Hands Free Speaker Phone" features.   No special connections are required between the sound card and the modem.   When the full-duplex sound card and this modem are installed properly with the correct drivers, the sound cards' microphone and speakers will be used for the "Hands Free Speaker Phone" function.

Q. Why does the BitPhone software from Bitware say "Can not open wave device" if I click the "SEND" button?

Answer:

1) You may not have a sound card or it is not supporting full duplex mode.

2) The serial wave device driver is needed for Speakerphone operation.   In most cases, this driver should be automatically be install into your latest version of Windows 95 operating system during driver installation. For cases of older version of Windows 95 operating system, sometimes, this driver did not install at all because the Microsoft UNIMODEM V Telephony System is not found in the OS. Thus, you need to install the UNIMODEM V driver from Microsoft Web page to your OS first before you manually install this serial wave device driver for the modem.

Installing the Wave Device for Voice Modem

  a) Start the Control Panel.

  b) Double click on the, "Add New Hardware", icon.

  c) Click on the Next button.

  d) Click on No when prompted with "Do you want Windows to search for your new hardware?".

  e) Click on the Next Button.

  f) Scroll down the Hardware types and highlight "Sound, video and game controllers".

  g) Click on the Next Button.

  h) Click on the Have Disk button.

  i) Insert the diskette containing the Windows 95 Driver (I.e. INF file) into Drive A or B. Select the drive and directory where the file is located, by clicking on Browse.

  j) Click on the OK button.

  k) The Serial Wave Device Driver will be shown on screen.

  l) Click on the OK button.

  m) Click on the Finish button.

  n) Restart Windows 95.

Q. How do I reduce the echo when using the Speaker phone?

Answer: Echoing occurs on the first release of the Speakerphone driver under version 2.15S.   This is unavoidable because we had not found a good solution that will reduce this echoing.   With the Version 3.0 release of this driver, we had improved this echoing tremendously.   However, to optimize the local and far echo's, you need to adjusting the microphone and speaker volume with the BitPhone program.   You may also need to adjust the microphone recording and speaker playback volume levels on the sound card's mixer. This may take a little trial and error to get optimum quality.   This quality is also depends upon different sound cards.

Sound cards with the following audio chipsets will work properly with our modem for speakerphone function:

  1. Crystal 4236/4232

  2. ESS 1868/1869//1888

  3. Opti 931

  4. Creative Vibra 16 (With Full Duplex Driver)

Q, How can I determine if my sound card can be used with the modem for Speakerphone feature?

Answer: The only requirement for the speaker phone feature is that a FULL DUPLEX sound card is installed and operating correctly.   To test if your sound card operates in FULL DUPLEX you need to record a Wave file while playing a Wave file.   You can use the Media Player to play a wave file and use the Sound Recorder to try to record the wave file that is being played.   If you get an error message stating that the device is busy, then you do not have a full duplex card or the driver is not functioning properly.

Q. What is the default Initialization string for my modem?

Answer: That depends on which countries that you are in. For the entire different country driver found on our web page, each driver was configured to meet different country telecommunication requirements. Most communication software will work, by issuing AT &F which loads the default modem settings. Warning, it may be against the your local telecommunication law if you use the wrong modem driver that is not specified for your country.

Q. How do I customize other communication software to work with CommWave?

Answer: For any communication software, try using the default initialization string AT&F.   For user of Cheyenne Bitware, please choose Class 1 and PCTEL MODEM as modem setup.

Q. What Modem should I select when using AOL, Compuserve or Prodigy Service dial-up software?

Answer: For most of the dialer software, you are required to configure the modem as "Hayes Compatible", select the correct COM port, and select the maximum DTE speed (115200bps).

Modem Compatible Settings

   a.   Compuserve = BOCA MV28KINT/EXT
   b.   b. AOL = Hayes Compatible V 2.5 (default)
   c.   Prodigy = Hayes Compatible 288

A default initialization string to try with other programs and services is: AT &F &C1 &D2 &K3 W1