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PC/VIEW & PC/180 TROUBLE SHOOTING GUIDE

Below are outlined the 3 most common conflicts encountered using **PC/View** and **PC/180**. Please read the entire document before attempting any changes to the computer system or **PC/View** or **PC/180** programs. Typically, these conflicts are noted by the message "PC32 sonar not found. Switch to demo mode?" This indicates some conflict in the computer that prevents it from finding the equipment via the parallel port. Other messages may appear as noted below.

PC's running Win2K and WinXP will always need setting changes to run the program.

1. Standard parallel port conflict: The **PC/View** and **PC180** use interrupt IRQ 7 to communicate with the hardware via standard parallel port. Some computers may have another device installed that will also try to load on IRQ 7, creating a conflict. We will use Soundblaster as an example. When the driver is loading "aggressively" on IRQ 7 at boot time, the interrupt will be taken from the **PC/View** or **PC180**, and any other interrupt-driven application.

Note: many parallel port applications, such as printer drivers, are not interrupt-driven and therefore do not suffer when this conflict exists.

There are two ways of addressing the conflict:

1. Use the port before the Soundblaster can.
2. Switch the Soundblaster to use another IRQ.

There are two ways to resolve this conflict for Win95 and Win98. In order of preference they are:

- A. Use the Device Manager to switch the Soundblaster's interrupt. There are many ways to get to the Device Manager. Perhaps the easiest to describe is through 'My Computer'. Here's the process for Windows 95/98:

1. Right click on the 'My Computer' icon (usually upper left of desktop).
2. Select the 'Properties' option.
3. Select the 'Device Manager' tab.
4. Right click on the 'Computer' icon at the top of the Device Manager box.
5. Select the 'Properties' option.
6. Select the 'Reserve Resources' tab.
7. Click on the 'Add' button.
8. Type "07" in the edit box.
9. You will now see a little "07" in the Reserved Resources box.
10. Reboot.
11. If you watch the boot cycle carefully, you should see the Soundblaster load on IRQ 5.
12. If your system acts funny or gives you new LPT messages/warnings, just revert to the unreserved IRQ and try our DriverLoadMethod.exe.

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Computers running Win2K or WinXP use a different method to access and alter the Port Settings. Please see the note at the end of section 2, LPT Port Address.

B. Use our “patch” program called ‘DriverLoadMethod.exe’ which ships and installs with all Windows versions of **PC/View & PC/180** X.2 and beyond. Within D.L.M., the **PC/View** parallel port driver can be configured for boot time load instead of the default runtime load. This is a relatively aggressive approach and should be avoided if possible.

Here’s the process for Windows 95/98:

1. Double click : My Computer: (C:) Drive: Programs File: Interphase File: **PC/View** or **PC/180**:
2. Open DriverLoadMethod.exe
3. Uncheck box marked Load Driver at Runtime.
4. Reboot.

2. LPT Port Address: There are 3 to select from in the Setup menu under Parallel Port, 0X378, 0X3BC and 0X278. The default is 0X378. Check to be certain that the **PC/View** or **PC/180** program is using the same address as the PC’s parallel port. The preferred setting is 0X378 (sometimes written as 0378).

The parallel port resources can be located as follows:

1. Right click on the ‘My Computer’ icon.
2. Click on the ‘Device Manager’ tab.
3. Double click on ‘Port (COM & LPT)’.
4. Double click on ‘Printer Port’.
5. Click on ‘Resources Tab’.
6. Select ‘Resource Type’ (typically 0378-037F).
7. Make changes as needed.
8. Reboot.

Computers using Win2K and WinXP Access both of the features in the following manner:

1. Got to ‘My Computer’ either via the desktop icon or Start menu.
2. Under the ‘System Tasks’ heading, click on ‘View System Information’.
3. Click on the ‘Hardware’ tab.
4. Click on ‘Device Manager’.
5. Scroll down to ‘Ports’ and open by clicking on the ‘+’.
6. Double click on ‘Printer Port’.
7. Click on the ‘Resources’ tab. The default settings should be “I/O Range 0378 – 037F” and “IRQ 07”. These are the proper and preferred settings for **PC/View** and **PC/180**. If they are not set up this way then the I/O range can be changed here. It is possible to change the LPT Port Address within the **PC/View** and **PC/180** to match other I/O settings on the PC. This is not preferred, but can be attempted if the preferred settings are not operating.

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LPT Port Settings in WinXP can also be viewed and changed by the following method:

1. Go to 'My Computer' either via the desktop icon or Start menu.
2. Under the 'System Tasks' heading, click on 'Change a Setting'.
3. Double Click on 'System'.
4. Click on the 'Hardware' tab.
5. Click on 'Device Manager'.
6. Scroll down to 'Ports' and open by clicking on the '+'.
7. Double click on 'Printer Port (LPT1)'.
8. Click on the 'Resources' tab. The default settings should be "I/O Range 0378 – 037F" and "IRQ 07".
9. Highlight 'I/O Range'.
10. Next to the text "Headings Based on..." scroll down to desired configuration.
11. Once the desired configuration appears after 'I/O Range' Click 'OK'.
12. The message " You adjusted one or more settings manuall. If you continue, these settings will be assigned to the device. Do you want to continue?" will appear. Click on 'Yes'.

In addition, it is ESSENTIAL that the Port Settings allow **PC/View** or **PC/180** to use the port.

1. Follow steps 1-6 above.
2. Click on the 'Port Settings' tab.
3. Select "Use Any Interrupt Assigned". The default is "Never Use An Interrupt". **PC/View** and **PC/180** cannot operate if this default setting is selected.
3. The parallel port protocol or "mode": This setting is typically made from the BIOS configuration that is accessible during the boot cycle. During the boot sequence, you can access a utility called SETUP by pressing either "Del" "Esc" "Ctrl-Esc" or "F2". This varies from system to system. Dell computers running both Win2K and WinXP access by pressing F2.

The three major BIOS manufactureres (AMI, Award, Phoenix) each provide a different Setup utility, though they are similar in function. Select the option that indicates "Ports" or "Integrated Peripherals" or Peripheral Setup" or simply "Advanced".

Scroll down to the Parallel Port Mode setting and select it.

Us the arrow keys (or PgUp/PgDn depending on brand) to set the mode to one of the following: **Bi-Directional**, **Standard** or **SPP**. These are the most often used modes that work with the program.

Other settings might include but are not limited to: Output Only, EPP or ECP. If you find that one setting does not work, try another.

Note: There are some exceptions, most notably Sony Vio, Gateway and Panasonic laptops which operate using the ECP mode.

Save and exit using the key sequence indicated at the bottom of the screen, usually "ESC" or "F10" or both. You may need to escape back to the main setup screen before you can save and exit.

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Once out of the Setup utility, the boot sequence will continue.

- The IBM Thinkpad also uses the ECP mode. However, it is accessed differently than other brands as follows: Control Panel: Thinkpad Config: Device Config: Parallel Port: Operating Mode: Select ECP.

- Dell computers running Win2K offer a setting under parallel port settings called "AT". Access the setting under 'Integrated Devices'. The "AT" setting should be selected over "ECP" or "EPP". Further, there is a need to alter the port's interrupt settings in the Device Manager. A button called "Never use an Interrupt" is normally checked. This box must be unchecked and the "Use any Interrupt Assigned" button should be checked. One way to access the Device manager is as follows:

1. Right click on 'My Computer'.
2. Select 'Properties'.
3. Choose the 'Hardware' tab.
4. Click on the 'Device Manager' button in the Device Manager box.
5. Scroll down to 'Ports' and open by clicking on the '+'.
6. Double click on 'LPT1' or "ECP Parallel Port".
7. Choose the 'Port Settings' tab.
8. Select radio option 3 'Use any Interrupt assigned to the Port'.
9. Click Ok.
10. Close the Device Manager window using the 'X' button in the upper right.
11. Close the Properties window with the OK button.

Dell computers running WinXP should use the default setting of 'Bi-Directional'. To access the bios:

1. Press F2 during the boot sequence.
2. Toggle to 'Advanced'.
3. Under 'Peripheral Configuration' go to 'Mode'.
4. Select 'Bi-Directional'. Note: Output Only, ECP and EPP are also available. In our tests using a Dell Dimension 4400 running WinXP(HE) the 'Bi-Directional' setting allowed PC/View and PC/180 to run. No other bios setting worked. This has also been confirmed to work on XP Pro.

For WinXP the critical settings are:

1. 'Use Any Interrupt Assigned' described at the end of section 2.
2. Disable the 'Compatibility' option. This option allows WinXP to operate as if it is using an older version of Windows (95, 98, 2000). Our program will not operate if any of these options is selected. The message "WinVUDLL Can't Create ISR Event" will appear if this option is active and the program will not run. The method for doing this is outlined below:

From the **PC/View** or **PC/180** ICON on the desktop:

1. Right Click on the icon.
2. Scroll down to and click on 'Properties'.
3. Click on the 'Compatibility' tab.
4. Unselect "Run this program in compatibility mode for".

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5. Also under this selection there are the following options: "Run in 256 Colors", "Run in 640x480 screen resolution", "Disable Visual Themes". ALL of the options should be unselected for best visual performance of **PC/View** and **PC/180**.

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