82340 or 82341 Interface Configuration Help

Please select one of the following:

Configuring the 82340 or 82341 Interface

Troubleshooting for the 82340 or 82341 Configuration

Configuring the 82340 or 82341 Interface

To configure the 82340 or 82341 GPIB interface for the I/O Libraries, you need to provide the following information.

NOTE

Several of the following configuration value fields may be read-only (not editable) depending on your particular type of GPIB interface (that is, if it is a newer, Plug and Play interface such as the 82341D, or if it is an older, non-Plug and Play interface.) If a field is read-only, this means that the configuration value for the interface is automatically detected by this configuration utility and is correct for your interface.

- **PNP number** is only displayed if this is a Plug and Play (PNP) interface. This is the serial number for the interface, which is printed on a sticker on the exterior connector plate of the interface card.

- **Base Address** indicates the base I/O port address for the interface. Note that if this interface is:

- A Plug and Play interface (such as an 82341D) on Windows 95, this field will say **Auto**, which means that the interface's Base Address is automatically detected and set.

- A non-Plug and Play interface, the Base Address is set by the interface's DIP switch settings. For information on setting the DIP switches, see the *I/O Installation Guide*.

- **SICL Interface Name** is a symbolic name that SICL uses to uniquely identify this GPIB interface. The default Interface Name is **hpib**. The SICL Interface Name must be a unique string of alphanumeric characters, starting with a letter. Remember this value and the Logical Unit number in order to address the GPIB interface properly in your SICL applications.

- **VISA Interface Name** is a symbolic name that VISA uses to uniquely identify this GPIB interface. The default VISA Interface Name is **GPIB0**. The Interface Name for VISA must begin with the string **GPIB** and have an integer appended to it, such as **GPIB0**, **GPIB1**, **GPIB2**, and so forth. Remember this value in order to address the GPIB device properly in your VISA applications.

- **Logical Unit** is a number that SICL uses to uniquely identify this GPIB interface. The Logical Unit number is an integer in the range of 0-10000. Remember this value and the SICL Interface Name in order to address the GPIB interface properly in your SICL applications.

- **Interrupt Line** is a hardware line over which I/O devices can send interrupts to the CPU. If this is a Plug and Play interface (such as the 82341D) on Windows 95, this field will say **Auto**, which means that this interface's Interrupt Line is automatically detected and set. Otherwise, you must reserve the Interrupt Line for exclusive use by this GPIB interface. For more information, see Choosing an Interrupt Line.

- **Bus Address** is the address of this GPIB interface on the GPIB bus. It is usually 21 if the GPIB interface is a system controller, or 20 if it is a non-system controller. (See System Controller below.) These addresses are chosen by convention, but any address in the range 0-30, inclusive, may be used.

- **System Controller** determines if this interface controls which bus devices talk and listen. If several devices exist on a bus, be sure each has a unique GPIB bus address and only one device is the System Controller (it is usually the one installed in the computer). Each GPIB interface has its own

independent bus. Thus, each may be a System Controller as long as it is not chained together with other GPIB interfaces.

If the configuration values that are displayed are acceptable to you, click on the **OK** button.

Otherwise, you can change the editable configuration values either by clicking on the arrows next to the values, or, if there are no arrows, by typing in the values you want. At any time, you can press the **Defaults** button to return the configuration dialog box to its default configuration values for the GPIB interface.

When you are done changing the values, either press the **OK** button if you want I/O Config to accept the changes, or press the **Cancel** button to cancel the changes and return to the previous configuration values for the GPIB interface.

Choosing an Interrupt Line

The Interrupt Line assigned for an 82340 or 82341 interface must be reserved for exclusive use by the interface. If this Interrupt Line is already being used by another interface, this will cause unpredictable behavior (such as system crashes, LAN problems, mouse tracking problems, etc.).

I/O Config will limit your choices so that you do not pick an Interrupt Line that conflicts with another configured GPIB interface, a parallel port, or an RS-232 port. However, I/O Config will not know about any other interfaces in your system. If you have another interface in your system that uses an Interrupt Line, you will need to avoid assigning this Interrupt Line to your 82340 or 82341 interface.

If you suspect an Interrupt Line conflict exists between an 82340 or 82341 interface and another interface on your system, either edit the configuration entry for the 82340 or 82341 interface (if the configuration entry is editable) and assign another Interrupt Line to the 82340 or 82341 interface, or assign another Interrupt Line to the other interface on your system.

Return to Configuring the 82340 or 82341 Interface.

Troubleshooting for the 82340 or 82341 Configuration

Please select one of the following:

I/O Config Cannot Find the 82340 or 82341 Interface

Resolving 82340 or 82341 I/O Port Conflict

Resolving 82340 or 82341 Interrupt Line Conflict

I/O Config Cannot Find the 82340 or 82341 Interface

The most common problem encountered when using I/O Config is that an interface is not found. For an 82340 or 82341 GPIB interface, this is due to one of the following reasons:

1. The interface was not installed in your system before running I/O Config.

To solve this problem, you need to install the GPIB interface card in your system and then run I/O Config again.

2. The interface is set up to use an I/O port address (Base Address) that is already being used.

To solve this problem, you need to resolve the I/O port address conflict. See Resolving 82340 or 82341 I/O Port Conflict.

3. The interface has already been configured by I/O Config.

To solve this problem, you need to *edit* the existing configuration entry for the interface, instead of trying to add a new interface. In the main I/O Config window, click on the name of the interface configuration entry for the 82340 or 82341 in the **Configured Interfaces** list box. Then click on the **Edit** button directly beneath the **Configured Interfaces** list box to edit the configuration entry for the 82340 or 82341 GPIB interface.

Resolving 82340 or 82341 I/O Port Conflict

If I/O Config does not find an 82340 or 82341 GPIB interface when you try to add a configuration entry for it, you may have an I/O port (Base Address) conflict with that interface. (Note that this can occur only on non-Plug and Play interfaces.) Neither I/O Config nor the I/O Libraries will recognize the 82340 or 82341 GPIB interface if a conflict exists with the I/O port Base Address used by the interface. To resolve this problem, select another I/O port address for the interface by changing its DIP switch settings.

Note that the selected I/O port address ranges must not conflict with other I/O interfaces installed in your computer, including other manufacturer's products (such as LAN interfaces, etc.). Refer to the documentation for the other interfaces and the following section to select unique Base Addresses for all the interfaces in your computer.

Setting the 82340 or 82341 I/O Port Address

The DIP switches on the 82340 or 82341 interface card set the I/O port Base Address that will be used by the interface. The following table lists the I/O port Base Address ranges specified by the different DIP switch settings:

Switches 1 2 3 4	I/O Base Address (Hexadecimal)	I/O Address Range Used (Hexadecimal)
0 0 0 0	250	250-257
1 0 0 0	270	270-277
0 1 0 0	350	350-357
1 1 0 0	370	370-377
0 0 1 0	220	220-227
1 0 1 0	280	280-287
0 1 1 0	390	390-397
1 1 1 0	380	380-387

Return to Troubleshooting for the 82340 or 82341 Configuration.

Resolving 82340 or 82341 Interrupt Line Conflict

The Interrupt Line assigned for an 82340 or 82341 GPIB interface by I/O Config must be reserved for exclusive use by the interface. If this Interrupt Line is already being used by another interface, this will cause unpredictable behavior (such as system crashes, LAN problems, mouse tracking problems, etc.).

If you suspect an Interrupt Line conflict exists between an 82340 or 82341 interface and another interface on your system, either edit the configuration entry for the 82340 or 82341 interface (if the configuration entry is editable) and assign another Interrupt Line to the 82340 or 82341 interface, or assign another Interrupt Line to the other interface on your system.

Note that I/O Config will not let you choose an Interrupt Line that is already being used by another interface. However, if the same Interrupt Line is assigned to another interface (for example, via the Device Manager in the Control Panel) *after* I/O Config is run, a conflict may occur.

In such a case, you can check the Interrupt Lines assigned for the various interfaces in your system via the Device Manager in the Control Panel. To do this, click on the **System** icon in the **Control Panel**. Then click on **Device Manager**, which will display information about the interfaces on your system. Select the 82340 or 82341 interface listed in the dialog box, and then click on **Properties**. This will show what interfaces, if any, are in conflict with the 82340 or 82341.

Return to Troubleshooting for the 82340 or 82341 Configuration.