

Diamond Knowledge Base

IRQ Conflicts & Settings | XP

IRQ Settings, how to view IRQ assignments and resolve IRQ conflicts

What is an IRQ?

IRQ stands for Interrupt ReQuest and refers to special numbered channels that are used by devices to get the processors attention. For example, when you press a key on your keyboard this sends a signal to the processor via an IRQ channel (usually IRQ 1) to let it know that it needs to process some data.

IRQ conflicts can occur when new hardware is installed or reconfigured, for example, it can cause problems if you have your mouse on COM 1 (IRQ4) and a modem on COM 3 (IRQ4), below is a list of the default assignments for IRQ channels in Windows XP.

Default ISA IRQ Assignments

IRQ 0	System Timer
IRQ 1	Keyboard
IRQ 2	Cascaded with IRQ 9
IRQ 3	Default COM2 and COM4
IRQ 4	Default COM1 and COM3
IRQ 5	LPT2
IRQ 6	Floppy Drive Controller
IRQ 7	LPT1
IRQ 8	Real Time Clock
IRQ 9	SEE 2
IRQ 10	Open
IRQ 11	Open
IRQ 12	PS/2 mouse or Open
IRQ 13	Math Coprocessor
IRQ 14	Primary Hard Drive controller
IRQ 15	Secondary Hard Drive controller

Viewing your current IRQ assignments

To view your current IRQ assignments you can open Device Manager.

Click on START, click on CONTROL PANEL Click on Performance and Maintenance Click on System Click on the Hardware tab Click the DEVICE MANAGER button

Once you have Device Manager open, select VIEW from the toolbar menu and then click Resources by Type.

Double click on Interrupt Request (IRQ) as seen in fig 1.1 below:

The list that appears on your machine will vary depending on the hardware you have.

If you are experiencing problems with a newly installed/configured piece of hardware and the drivers are installed correctly then check to see if it has its own IRQ channel.

Changing IRQ Settings

Warning: Changing system resources such as IRQ channels can result in your computer not functioning correctly, always make a note of the settings before you change anything so you can restore them back if required. If you do have a conflict and need to change an IRQ setting:

Right click on the device in the list (see above) and then select properties. Click the Resources tab. Remove the tick from the Use automatic settings option. Select a non-conflicting configuration from the pull down box. Click OK

You may find you cannot manually change your IRQ settings (the Use automatic settings will be greyed out), this is usually related to the ACPI function used by Windows XP.

To resolve conflicts with PCI or ISA cards try manually setting them in your motherboard's BIOS or try a different slot for the newly installed device, you will usually find that by changing the slot you will change the IRQ channel as well.

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