# I/O Professional Plus<sup>™</sup> High-IRQ I/O

# **User's Manual**

# **Questions?**

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## Comments:

### PRODUCT NAME I/O Professional Plus

## MODEL NUMBER IO1831

FCC RULES: TESTED TO COMPLY WITH FCC PART 15, CLASS B OPERATING ENVIRONMENT: FOR HOME OR OFFICE USE

## FCC COMPLIANCE STATEMENT:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## FCC NOTICE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna
- · Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- · Consult the dealer or an experienced radio or TV technician for help

#### Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment

> THE PARTY RESPONSIBLE FOR PRODUCT COMPLIANCE SIIG, Inc. 6078 Stewart Ave. Fremont, CA 94538-3152 (510) 657-8688

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03-0235C

September, 1998

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**CE** Declaration of Conformity

Manuf	acturer's Name	SIIG, Inc.	101
Manufacturer's Address		6078 Stewart Avenue Fremont, CA 94538 USA	
Declar	es, that the product	POSSON .	
Produ	et Name:	I/O Professiona	l Plus
Model	Number(s):	IO1831	- 1
Produ	et Options:	N / A	The second second
Confor	ms to the following Pro	duct Specification	18:
EMC	EN55022/CISPR22	Class B	and the second second
	EN50082-1:1992	IEC 801-2:1991 IEC 801-3:1984 IEC 801-4:1988	2kV CD, 8kV AD 27-500MHz, 3V/M 0.5kV Signal Lines, 1kV Power Lines
Applic	ation of Council Direct	ive(s):	

The product herewith complies with the requirements of the EMC Directive 89/336/EEC

## THE PARTY RESPONSIBLE FOR PRODUCT COMPLIANCE:

Ivell Trading Ltd. Ivell House Commerce Way Colchester, Essex CO2 8HL Telephone: 01206 799520



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# **About this Manual**

The purpose of this manual is to introduce you to your *I/O Professional Plus*. It will guide you on how to configure and install the board for proper operation in your computer. Please save this manual for future reference.

This manual is comprised of the following sections:

#### Chapter 1: Introduction

Provides unpacking instructions and introduces the features of the *I/O Professional Plus*.

Chapter 2: Verifying and Configuring System Resources Provides an overview of basic principles for setting up new devices for trouble-free operation. A special section is included for Windows 95/98 users.

## Chapter 3: Installation

Provides step by step instructions on how to configure and install the *I/O Professional Plus* into your computer.

## **Chapter 4: Technical Support**

Provides instructions on how to obtain technical support and return the product.



# Chapter 1 Introduction

Thank you for your purchase of the *I/O Professional Plus*. SIIG's goal is to provide its customers with affordable, quality products, backed by prompt customer support.

The purpose of this comprehensive user's manual is to:

- introduce you to your I/O Professional Plus's features and specifications
- guide you through the steps for an easy, trouble-free installation of hardware in your system
- provide technical support information in the event of a problem.

Before installing the board, please review this chapter for unpacking instructions and an overview of key features. Then refer to *Chapter 2: Verifying and Configuring System Resources* for detailed procedures on how to verify system resources and configure the board in Windows 95/98 and *Chapter 3: Installation* for easy to follow installation procedures.

## 1-1 Unpacking Your I/O Professional Plus

Please verify that the following items are included in the packaging carton:

- One I/O Professional Plus board
- · One connector bracket with a 9-pin serial port
- This comprehensive user's manual

Please consult your dealer if any item is damaged or missing.

## 1-1.1 Static Electricity Precaution

One of the routine precautions you must be aware of when working with computer components is the problem of static electricity discharge.

Note Leave the I/O Professional Plus in its staticresistant bag until you are ready to install it.

Caution Static electricity discharge may permanently damage your system. In order to avoid possible static electricity discharge during installation procedures, please follow the guidelines below:

- Discharge any static electricity build up in your body by touching a large grounded metal surface or the computer's case (if plugged in), for a few seconds.
- During installation procedures, avoid any contact with internal parts. Handle boards only by their edges.

## 1-1.2 Record the Serial Number

In order for SIIG's Technical Support or Customer Service Department to give you prompt service, you will need the following product information. *The serial number label is located on the side of the box and on the back of the board.* 



Please take a moment to record the serial number.

Serial Number:

Part Number: JJ-A21022
Date purchased: \_\_\_\_\_

## 1-2 Introducing Your I/O Professional Plus

The *I/O Professional Plus* is a 16-bit ISA enhanced I/O expansion board for Pentium or 486/386 computers. It provides two high-speed 16550 UART serial ports (both are 9-pin) and one IEEE 1284 EPP/ECP enhanced parallel port. In addition, high IRQ support provides maximum flexibility for your system expansion needs..

The high-speed serial ports support data transfer throughput up to 115.2 Kbps. It is ideal for high-speed external modems, PDAs, printers and other serial port devices.

The enhanced parallel port is ideal for iomega<sup>\*</sup> and SyQuest<sup>\*</sup> parallel port removable cartridge drives, CD-R/RWs, SuperDisk<sup>™</sup>(LS-120) parallel port drives, scanners, tape backups and more.

## 1-2.1 Key Features and Benefits

- Two high speed 16550 UART serial ports support:
  - 16 byte transmit and receive FIFO buffers deliver reliable high-speed data transfer
  - COM1-4 I/O addresses 3F8h, 2F8h, 3E8h and 2E8h
  - -IRQ 3-5, 7, 9-12, and 15
- One IEEE 1284 (EPP/ECP) parallel port supports:
  - I/O addresses 3BCh, 378h and 278h
  - DMA channels 0, 1 and 3
  - IRQ 5, 7 and 9-12
  - EPP/ECP, Bi-directional Parallel Port (BPP) and Standard Parallel Port (SPP) modes

## 1-2.2 System Requirements

Pentuim-class or 486/386 computer with one available 16-bit ISA slot

# Chapter 2 Verifying and Configuring System Resources

This chapter is provided to help you:

- · understand the basic concept of system resources
- configure the board properly in Windows 95/98

Note A special section is provided as a guide for . configuring a board in Windows 95/98 operating system.

# 2-1 Overview of System Resources

System resources refer to the addresses and communication channels that hardware devices use to communicate with the system. System resources typically include the following:

- · I/O port address
- Interrupt ReQuest (IRQ) channel
- Direct Memory Access (DMA) channel

The resources used by a device depend on its function. For example, communications ports require an I/O address and an IRQ; sound cards need an I/O address, an IRQ and at least one DMA. Although there can be exceptions, the key to a successful installation is that the resources set for each device be different from any other device in your system. A conflict will result if there is a common setting between devices.

System resource conflicts causes many symptoms, such as:

- · A device stops working
- · The system frequently locks up
- · Garbled characters appear on the monitor screen

Every *non* plug-and-play board delivered with factory jumper/switch settings are considered standard for the type of device(s) it supports. These are usually safe settings for basic systems. However, as devices upgrade continues, resource issues become more complex.

To avoid conflicts,

- verify current system resources before installing the board
- make sure the factory default settings of the board do not conflict with other existing devices resource settings in the system. If conflict occurs, reset the jumper setting of the board.

Currently AT/Pentium computers support 16 IRQs—but they are not all available to you! Some are reserved for system use, some have been reserved for standard installed devices such as mouse, fax/modem, printer, sound card, etc., leaving only the high IRQs (IRQ10 or above) for further expansion needs (which conventional boards don't support!).

To take advantage of the latest computer technology, SIIG offers High-IRQ and Multi-COM-Port I/O cards that provide maximum upgrade and expansion flexibility. When you need to add new devices such as a serial label printer, network card or second disk drive controller... the high IRQ level support allows you to do it. The same holds true for the Multi-COM-Port feature. Instead of the conventional COM ports (COM 1-4), up to 12 COM ports can be supported! These boards are designed to provide the greatest flexibility for your future expansion needs!

## 2-1.1 I/O Port Address

Every I/O port uses an I/O address to communicate with the system. Considering future system expansion needs and possible I/O address conflicts, an I/O board that supports more than conventional I/O addresses is strongly recommended. The following table lists the conventional I/O addresses:

Port	Base I/O address	
COM1	3F8h	
COM2	2F8h	
COM3	3E8h	
COM4	2E8h	
LPT1	3BCh or 378h	
LPT2	378h or 278h	
LPT3	278h only	

## 2-1.2 Interrupt Requests (IRQ)

Hardware devices use interrupt request (IRQ) channels to signal the motherboard that a request must be fulfilled. **IRQ usually cannot be shared**. Considering future system expansion needs and possible IRQ conflicts, an I/O board supports high-IRQ is strongly recommended. The following table lists the 16 IRQs supported by the 16-bit ISA bus:

Standard Function	Card Type
Timer Click	
Keyboard 🐄	
Second IRQ Controller Cascade	-
Serial Port 2 (COM2: COM4:)	8/16-bit
Serial Port 1 (COM1: COM3:)	8/16-bit
Sound/Parallel Port 2 (LPT2:)	8/16-bit
Floppy Disk Controller	8/16-bit
Parallel Printer Port LPT1:	8/16-bit
Real-Time Clock	-
Redirected as IRQ2*	8/16-bit
Available	16-bit
Available	16-bit
Available/PS/2 Mouse	16-bit
Math Coprocessor	-
Primary IDE HDD	16-bit
Available/Secondary IDE HDD	16-bit
	Standard Function Timer Click Keyboard Second IRQ Controller Cascade Serial Port 2 (COM2: COM4:) Serial Port 1 (COM1: COM3:) Sound/Parallel Port 2 (LPT2:) Floppy Disk Controller Parallel Printer Port LPT1: Real-Time Clock Redirected as IRQ2* Available Available Available Available Available/PS/2 Mouse Math Coprocessor Primary IDE HDD Available/Secondary IDE HDD

\* Any device set to IRQ2 is actually using IRQ9.

Note IRQs 0, 1, 2, 8 and 13 are reserved for system use; IRQs 10, 11, 12, 14 and 15 require 16-bit devices.

## 2-1.3 Direct Memory Access (DMA)

High-speed communications devices that send and receive information at high speed, such as sound cards and SCSI adapters, use DMA channels. DMA channels can sometimes be shared if the same DMA is never used simultaneously.

The following table lists the eight supported DMA channels:

DMA	Standard Function	Transfer
0	System reserved	8-bit
1	Available/Sound Card	8-bit
2	Floppy Disk Controller	8-bit
3	Available	8-bit
4	First DMA Controller Cascade (not usable)	
5	Available/Sound Card	16-bit
6	Available	16-bit
7	Available	16-bit

Note DMA 0 is not available in Windows 95/98 as manual assignment.

## 2-2 Configuring I/O Ports in Windows 95/98

The Windows 95/98 allows you to easily determine the current resource status, plus manually install and verify new device resource settings for proper operation.

The following outlines the steps to install a device:

## 1. Verify Current System Resources

a. Starting from the main desktop, double-click on My Computer / Control Panel / System / Device Manager.

Click on the *Print* button to print out a Resource Summary Report. Or,

Click on *Properties* button to display the current resources used in the system under the *View Resources* tab.

mputer P	roperties	?
View Reso	urces Reserve Resources	
C Intern	at jequest (IFIQ) C Direct memory access (DMA) (guiput (1/0) C Memory	
Setting	Hardware using the setting	
00	System timer	111
201	Standard 101/102-Key or Microsoft Natural Keyboard	
02	Programmable interrupt controller	12
003	NE2000 Compatible	1.5
204	Communications Port (COM1)	- 5
905	Communications Port (CDM3)	- 12
306	Standard Floppy Disk Controller	- 20
207	ECP Printer Port (LPT1)	- 12
		-
1 martin		_
	UK	Lancel



- Select the Interrupt request (IRQ) option to display the IRQs in use.
- Select the Input/output (I/O) option to display addresses in use.
- Select *Direct memory access* (*DMA*) to view the DMAs in use.

Resources NOT listed are available resources for manual assignment (see Figure 2-1).

- b. Exit Windows and turn the system off.
- Reconfigure the on-board default jumper setting according to available system resources (refer to Chapter 3 for alternate jumper setting if necessary).
- 3. Install the board and restart the system

## 4. "Add New Hardware" procedures

- a. Go to the *My Computer / Control Panel* and doubleclick on *Add New Hardware* icon and click *Next*. (For Windows 98, click *Next* again)
- b. Click No then click Next.
- c. Scroll down and double-click on Ports [COM & LPT).
- d. From the Add New Hardware Wizard dialog box, select Standard port types under manufacturer window in the left. Then select Communications port (for serial port); ECP Printer Port or Printer port (for parallel port) that matches the port you have installed under model window in the right accordingly. Click Next. (See Figure 2-2)

Note Select ECP Printer Port only if DMA is assigned.

YOWARS.
ave Disk

Figure 2-2

e. Click Next, Next then Finish respectively.

Note Disregard the screen displaying the default I/O address assigned by the Windows

f. Select No to NOT shut down.

- 5A. Verify and/or reconfigure serial port settings (Skip to Step 5B for parallel port setup procedures)
  - a. From Control Panel, click on System / Device Manager.
  - b. Double click on Ports [COM & LPT], then high-light the new communication port added and click on Properties.
  - c. Click on *Resources* tab. If the displayed setting matches the board setting, select **OK** and skip to *step f*. If not, continue to *step d*.

nmunications Port	(CUM1) Properties	
eneral Port Settings	Driver Resources	
Communical	ions Port (COM1)	
V		
Resource settings:	Calling	-
Interrupt Request	04	
Input/Output Ren	03F8 - 03FF	
Setting based on:	tasic configuration 0000	~
sound besser are lie	Sasic Conliguation 0000	1
Change Setting	Use automatic setting	5
Conflicting device list:		
No conflicts.		<u> </u>
		-



d. Uncheck Use automatic settings check box (see Figure 2-3).

- Highlight "Input/Output Range", then click on Change Setting. If a message "This resources setting cannot be modified" is displayed, select another Basic Configuration and click on Change Setting again until the Edit Input/Output Range dialog box will appear.
- From the Edit Input/Output Range dialog box, select the I/O port address to match the board setting in the "Value" drop-down box. (see Figure 2-4)

dit Input/Output Range		?
Enter the input/output rang device:	e you would like to set fo	or this
You may either enter a spec range will be automatically a using the up and down arro	cific range and the near selected, or you may sele ws.	est valid ect a range
Value: 02FS202FF		
Conflict Information The setting you have ch other devices.	hosen does not conflict v	with any
No devices are conflict	ting.	- second
		- 1

Figure 2-4

- e. Repeat *step d* to verify and (if necessary) to change the **Interrupt Request** setting.
- f. Restart the system.

Note Repeat *step 4* to 5A for each additional serial port added to the system.

## 5B. Verify and/or reconfigure parallel port settings

- a. From Control Panel, click on System / Device Manager.
- b. Double click on *Ports [COM & LPT]*, then high-light the new parallel port added and click on *Properties*.
- c. Click on *Resources* tab. If the displayed setting matches the board setting, select **OK** and skip to *step f*. If not, continue to *step d*.

P Printer Port (LPT1) P	Properties	?
eneral Driver Resource		
ECP Printer Port	(LPT1)	
Resource settings:		
Resource type	Setting	
Direct Memory Access	01	
Interrupt Request	07	-
Input/Output Range	0378 - 037F	
Setting based on: Basic	configuration 0001	
Change Setting	Les automatic settings	
Conflicting device list		
No conflicts.	the state of the state of	-
· · · · · · · · · · · · · · · · · · ·		8
· A MERINE PROPERTY		Cance
AND THE PARTY IN THE	UN J	carc

Figure 2-5

d. Uncheck *Use automatic settings* check box (see Figure 2-5).

- Select the *Basic Configuration* to display all the resource types assigned for the port i.e. I/O, IRQ and DMA. (DMA is assigned only when ECP Printed Port is selected)
- Highlight "Input/Output Range", then click on Change Setting to open the Edit Input/Output Range dialog box.
- From the Edit Input/Output Range dialog box, select the I/O port address to match the board setting in the "Value" drop-down box. (see Figure 2-6)





- e. Repeat *step d* to verify and (if necessary) to change the **Interrupt Request** and **DMA** setting.
- f. Restart the system.

Note Repeat *steps* **4** and **5B** for each additional parallel port added to the system.



# Chapter 3 Installation

This chapter will guide you through the installation of your *I/O Professional Plus*. It includes instructions on how to:

- · properly configure the jumpers on your board
- · install the I/O Professional Plus in the computer

## 3-1 Board Layout



Figure 3-1. I/O Professional Plus Board Layout

# 3-2 Configuring the I/O Professional Plus

# **!!! IMPORTANT !!!**

Prior to installing the *I/O Professional Plus*, please review *Chapter 2 Verifying and Configuring System Resources* to ensure that the factory default settings (I/O address and IRQ) are different from any other existing devices in your system. A conflict results when more than one devices use the same system resource. Also, *Chapter 2* explains how to configure the board in Windows 95/98.

Refer to the following sections for alternate jumper setting to reset the board, if needed.

# 3-2.1 Setting Jumpers

Figure 3-2 illustrates the installed positions on a 2-pin or 3-pin jumper. It also shows the non-jumpered position and position for convenient storing.

To change a jumper, simply remove a selected jumper by pulling up on its pull tab. To install a jumper, center it over the two appropriate pins and push down gently until it is seated.







Storage Position

No Jumper Installed

Jumper Installed

**Figure 3-2. Jumper Positions** 

## 3-2.2 Default Jumper Settings

The following table and figure identify the default jumper settings:

Description	Jur	nper-Pins	Default Setting
SI01 - Serial Port 1	J4	COM3	COM3 (3E8h)
(9-Pin)	J2	11 (pin 2-3)	IRQ 11
SI02 - Serial Port 2	J5	COM4	COM4 (2E8h)
(25-Pin)	J2	10 (pin 1-2)	IRQ 10
Parallel Port	J6	278	278h
	J3	9 (L)	IRQ 9
	J7	EPP/ECP	ECP/EPP
	J1	3	DMA 3



## Figure 3-3. Default Jumper Settings

3-4

# 3-2.3 Serial Port 1 (SIO1)

The Serial Port 1 (SIO1) is factory configured as COM3 with I/O port address 3E8h and IRQ11. If you need to change these settings, reset jumpers J4 and J2 respectively.

# I/O Port Address

e courp tron	Jumper	Jumper Setting
COM1 (3F8h)	J4	COM COM COM DIS 1 3 4 ABLE
COM3 (3E8h)*	J4	COM COM COM DIS 1 3 4 ABLE
COM4 (2E8h)	J4	COM COM COM DIS 1 3 4 ABLE
Disable	J4	COM COM COM DIS 1 3 4 ABLE

# Interrupt Request

If you select COM 1 or COM 3 as the I/O port address for Serial Port 1, refer to the following illustration for alternate IRQ setting:

Description	Jumper	Jumper Setting
IRQ3	J2	IRO 3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0
IRQ4	J2	3 4 5 7 9 10 11 1215 1 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0
IRQ5	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ7	J2	3457910111215 1000000000000000000000000000000
IRQ9	J2	3457910111215 1000000000000000000000000000000
IRQ10	. J2	3 4 5 7 9 10 11 1215 1 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0
IRQ11*	J2	
IRQ12	J2	3 4 5 7 9 10 11 1215 1 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ15	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0

\*= Factory Default

3-5

## Interrupt Request (continued)

If you select COM 4 as the I/O port address for Serial Port 1, refer to the following illustration for alternate IRQ setting:

Description	Jumper	Jumper Setting
IRQ3	J2	IRQ 3 4 5 7 9 10 11 12 15 1 2 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0
IRQ4	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0
IRQ5	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ7	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ9	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0
IRQ10	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ11	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ12	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ15	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

## 3-2.4 Serial Port 2 (SIO2)

If you intend to use Serial Port 2 (SIO2), you must first install the connector bracket (with mounted 25-pin serial port) that is included with the board. This port is factory set as COM4 2E8h and IRQ10. It can be changed by resetting jumpers J5 and J2 respectively.

## **I/O Port Address**

Description	Jumper	Jumper Setting
COM2 (2F8h)	J5	COM COM COM DIS 2 3 4 ABLE
COM3 (3E8h)	J5	US COM COM COM DIS 2 3 4 ABLE
COM4 (2E8h)*	J5	COM COM COM DIS 2 3 4 ABLE
Disable	· J5	
	a 10	

\*= Factory Default

## **Interrupt Request**

If you select COM 2 or COM 4 as the I/O port address for Serial Port 2, refer to the following illustration for alternate IRQ setting:

Description	Jumper	Jumper Setting
IRQ3	J2	IRQ 3 4 5 7 9 10 11 12 15
IRQ4	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0
IRQ5	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ7	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0
IRQ9	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ10*	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ11	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ12	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ15	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
*= Factory Default		

# Interrupt Request (continued)

If you select COM 3 as the I/O port address for Serial Port 2, refer to the following illustration for alternate IRQ setting:

Description	Jumper	Jumper Setting
IRQ3	J2	IRO 3 4 5 7 9 10 11 12 15
IRQ4	J2	
IRQ5	J2	
IRQ7	J2	
IRQ9	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0
IRQ10	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ11	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
IRQ12	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0
IRQ15	J2	3 4 5 7 9 10 11 12 15 1 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0

# 3-2.5 Parallel (Printer) Port

The parallel port provides a DB25 (25-pin) connector mounted on the board. It is factory set as I/O port address 278h, IRQ9, DMA 3 and ECP/EPP mode. These assignments can be changed by resetting the following jumper options on J6, J3, J7 and J1 respectively.

## **I/O Port Address**

Description	Jumper	Jumper Setting
378h	J6	378 278 3BC DIS ABLE
278h*	J6	378 278 3BC DIS ABLE
3BCh	J6	378 278 3BC DIS ABLE
Disable	J6	378 278 3BC DIS ABLE

\*= Factory Default

lest	
Jumper	Jumper Setting
J3	7 10 12 PRT H IRQ L
J3	J3 5 9 11 7 10 12 H ■ 日 日
	5911
J3	7 10 12
	5 9 11
J3	7 10 12
	5911
JЗ	7 10 12 H = = = L = = = 5 9 11
J3	
	Jumper J3 J3 J3 J3 J3 J3 J3

**Note:** A typical sound card will use IRQ5. If you want to use IRQ5 as your parallel port setting, please refer to your sound card's manual and reconfigure your sound card's IRQ settings to avoid conflicts.

## Port Mode

The parallel port is factory set for **ECP/EPP** mode. If you plan to use a different mode, reset jumpers **J7**.

Description	Jumper	Jumper Setting
SPP	J7	SEEEN PC/PPN PPPPE
ECP/EPP*	J7	S E E E N P C/P P N P P P E
EPP	J7	S E E E N P C/P P N P P P P
None (Not defined)	J7	S E E E N P G/P P N P P P P

**Note** If ECP/EPP or ECP mode is selected, DMA needs to be assigned. Also, if EPP or ECP/EPP mode is selected, the I/O address 3BCh cannot be used.

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## \*= Factory Default

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## DMA Channel

DMA channels are used for some high speed communication devices. Assign a DMA channel only when you set the parallel port mode as **ECP/EPP** mode.

Description	Jumper	Jumper Setting
DMA 0	J1	DMA J1
DMA 1	J1	
DMA 3*	J1	
No DMA Selected	J1	

Note DMA 0 is not available in Windows 95/98 as manual assignment. Also, a typcial sound card will use DMA 1 or DMA 5. If you want to use DMA 1 as your parallel port setting, please refer to your sound card's manual and reconfigure your card's DMA setting to avoid conflicts.

\*= Factory Default

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## 3-3 Installing the I/O Professional Plus

General instructions for installing the board are given since the design of computer chassis varies. Refer to your computer's reference manual for information on removing the computer cover.

- 1. Turn OFF the power to your computer and any other connected peripheral devices.
- 2. Unplug the power cord from the back of the computer.
- 3. Remove your computer's cover by removing its mounting screws and sliding off the cover.
- 4. Select an available 16-bit ISA slot for the board and an adjacent slot for installing the connector bracket.
- 5. Remove the slot bracket by unscrewing the holding screw and sliding it out. Save this screw for securing the board after it is installed. Follow the same procedure for the connector bracket.



Figure 3-4. Remove the Slot Bracket

- 6. To install the *I/O Professional Plus*, carefully align the board's bus connector to the expansion slot on the motherboard. Push the board down firmly, but gently, until it is well seated.
- To install the connector bracket, carefully slide it into the selected slot where the slot bracket had been removed.

**Note** Hold the board by its external edges only. Try to avoid touching the components, connectors or pins.



Figure 3-5. Installing the I/O Professional Plus and Connector Bracket I/O Professional Plus User's Manual

- Replace the slot bracket holding screws to secure the board and the connector bracket to the rear slot panel.
- Connect the connectors of the bracket's cable to the onboard connector SI02. Make sure pin 1 of the ribbon cable (the side imprinted with color stripe) is matched with pin 1 of the on-board connector (indicated by a silk screened number 1).
- 10. Replace the computer's cover.
- 11. Reconnect the power cord and make new connections to the ports.





## 4-1 Overview

This chapter will give you instructions on how to obtain product information, contact technical support, and return defective product. This user's manual is written with easyto-understand instructions on how to configure and install the card in your system. We encourage you to consult this manual as your first step for technical assistance.

There are several steps you can take should you find problems with your card. It is most helpful if you consult the following resources:

- 1. Chapter 2 & 3 in this user's manual
- 2. Web Site (Section 4-2)
- 3. Technical Support Department (Section 4-3)
- 4. Customer Service Department (Section 4-4)

## 4-2 Web Site

Visit SIIG's Web site for more product features, drivers updates, upgrade solutions, FAQs, and where-to-buy information. Your opinions of SIIG products are very important to us. Through your feedback, SIIG can continue to deliver quality, innovative products to you.

## Web Site: www.siig.com

## 4-3 Technical Support Department

For additional support, SIIG's Technical Support Specialists are available from 8:00 a.m. to 5:00 p.m. Monday through Friday, Pacific Standard Time.

## e-mail: support@siig.com Telephone: (510) 353-7542

In order for SIIG's Technical Support to give you prompt service, you will need the following information about the card.

Part Number: JJ-A21022 Computer Configuration: \_\_

Note Make sure you are ready with the part number and description of the problem, so the Technical Support Specialist can better help you.

## 4-4 Customer Service Department

If the Technical Support Specialist determines that the card may be defective, you can return it for repair or replacement.

SIIG warrants to the original buyer of the card that the hardware is free of defects in materials and workmanship for a period of five years from the date of purchase. If your card fails to be in good working order during the warranty period, you may return it to SIIG for repair or replacement at SIIG's option.

To return the card you need to follow these steps.

## Step 1: Call SIIG's Customer Service Department

Call the Customer Service Department at (510) 657-8688 ext. 5333 for a Return Merchandise Authorization (RMA) number. In order to get a RMA number, you must have your product serial number. The serial number is located on the side of the box it came in and on the back of the card.



## Step 2: Complete the RMA form

- Fill out your Return Merchandise Authorization (RMA) form, and include it in the package.
- Properly pack the card for shipping. All the materials that came with the original package should be included.
- Clearly write your RMA number on the outside of the returned shipping package and on the accompanying RMA form.

SIIG will refuse to accept any shipping package, and not be responsible for a product returned without a RMA number posted on the outside of the shipping carton.

## Step 3: Ship the I/O Professional Plus

You are responsible for the cost of shipping the card back to SIIG at the following address:

SIIG, Inc. RMA#\_\_\_\_\_ 6078 Stewart Ave. Fremont, CA 94538

SIIG will ship the repaired or replaced the board via UPS Ground or US Mail at no cost to you.

## **PRODUCT SUPPORT/SERVICE PROCEDURE**

The Company is committed to producing quality products. Most of our customers will never have to address a product failure. However, in the unlikely event of a technical problem or a product failure, we have provided a return procedure and a RMA Form for your convenience.

#### In the event of a problem or product failure, please follow the steps below:

- Collect as much information about the problem as you can. Note any on-screen messages or any other clues you observe when the problem occurs.
- Have information about your computer's configuration (i.e. how many drives, memory, boards, ports, etc.) available. In addition, have information about the product available (i.e. product name, serial number & part or model number).
- 3. Call the Company's Product Support for assistance at (510) 353-7542. The Company's Product Support representatives are available M-F from 8:00am 5:00pm (Pacific time). Should you call on an off-hour or if there are no representatives available to take your call, please leave a message. Calls will be returned in the order that they were received. In most cases your question can be answered right away.
- 4. If the product is diagnosed as defective, you will be transferred to our customer service department and issued a Return Merchandise Authorization (RMA) number to authorize the return of the product to us for repair or replacement. Customer Service: (510) 657-8688 ext. 5333
- 5. Package the product so that it is well protected during transit. Please also include the attached RMA Form and a copy of your proof of purchase and mail to the address below. Be sure to write the RMA number clearly on the outside of the box.

Mail to: SIIG, Inc. RMA #\_\_\_\_\_ 6078 Stewart Avenue Fremont, CA 94538

Tear off and return bottom portion.

## **RETURN MERCHANDISE AUTHORIZATION (RMA) FORM**

RMA Number:		Date:	/ /
Name:			
Company:	×,		
Address:			
City:		State:	Zip:
Phone Number: ()	ж.		
Product Name/Model:		Purchase Date:	1 1
Serial Number:			
Problem(s) (please be specific):			
54	And the second		
Please check additional items that	you are returning (	(if applicable):	
original package	] manual(s)	software	
accessories:			

## LIMITED 5 YEAR WARRANTY

The Company warrants to the original buyer of this product that the hardware is free of defects in materials and workmanship for a period of five years from the date of purchase from a reseller or dealer. Should this product fail to be in good working order during the warranty period, the Company, at its sole option, will repair or replace the defective product with an identical product or product having similar features and functionality as determined by the Company.

If the product has been modified without written approval by the Company, or the failure is a result of misuse, abuse or misapplication as determined by the Company, the warranty is void and the Company has no obligation to repair or replace the product.

The customer is responsible for properly packing the defective product for shipment and for the cost of shipping the product back to the Company. The Company will ship the repaired or replaced product via UPS Ground or US Mail at no cost to the customer.

At the request of the customer, the Company will ship the repaired or replaced product via a faster mode of shipment. The Company will pay for the cost of the shipping to return the product to the customer UP TO THE COST OF SHIPPING VIA UPS GROUND. The customer is responsible for any shipping charges above the cost of shipping via UPS Ground. This payment must be prepaid or included with the returned product, otherwise the Company will ship the repaired product COD for the amount of the additional costs.

Before returning a product for repair or replacement, you must first obtain a Return Merchandise Authorization (RMA) number from the Company's Customer Service Department by calling (510) 657-8688 ext. 5333 (see Product Repair/ Replacement Procedure). To verify that the product is within the five year warranty period, the customer must provide proof of purchase to the Company when requesting a return authorization. The RMA number should be clearly displayed on the outside of the returned package and on the accompanying RMA form. The Company will refuse any package without a RMA number.

Under no circumstance will the Company be liable for any direct, indirect, consequential or incidental damages arising out of the use or inability to use the Company's products. Some states do not allow the exclusion or limitation of liability for consequential or incidental damages, so the above limitations may not apply. The Company reserves the right to make modifications in both hardware and software without prior notification.