USER MANUAL

PCI - SOUND CARD

March 1998

FCC
Version 1.0

A301D10

FEDERAL COMMUNICATIONS COMMISSION (F.C.C.) 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.

This equipment has been tested and found to comply with the limits of 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 or 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:

1. Reorient / Relocate the receiving antenna.

2. Increase the separation between the equipment and receiver.

3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

4. Consult the dealer or an experienced radio/ TV technician for help.

NOTE: 1. **The use of a non-shielded interface cable with this equipment is prohibited.**

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

TABLE OF CONTENTS

1. DESCRIPTION

This is a new audio adapter that provides the next generation of PCI audio performance to the PC market. The adapter not only meets the new demands of advanced PC audio applications but also enables the integration of a complete multimedia subsystem on a single adapter. The adapter functionality and interfaces are compliant with all major industry standards, including the Sound Blaster Compatible, PC97, Windows 95 Direct Sound, Windows Sound System and PCI 2.1 bus specification.

1.1. Features

PCI 2.1 compliant

PCI Bus Power Management rev. 1.0 compliant

PCI Bus master for PCI Audio

- ⇒ True Full Duplex Playback and Capture with different Sampling Rate
- ⇒ Maximum 64-voice XG capital Wavetable Synthesizer including
- ⇒ GM compatibility
- ⇒ Direct Sound Hardware Acceleration
- ⇒ Direct Music Hardware Acceleration
- ⇒ Downloadable Sound (DLS) level-1

Legacy Audio compatibility

- ⇒ Genuine OPL3
- ⇒ Hardware Sound Blaster Pro compatibility
- ⇒ MPU-401 UART mode MIDI interface
- ⇒ Joystick

Supports PC/PCI and distributed DMA for Legacy

DMAC (8237) emulation

Supports I^2S serial input port for Zoomed Video port (optional)

Supports Consumer IEC958 Output (SPDIF) port

Supports AC-1 interface (AC-Link)

Single Crystal operation (24.576 MHz)

5V Power supply for I/O. 3.3V Power supply for internal core logic

Compliant with AC'97 Requirements

- ⇒ 4 Stereo Inputs: LINE, CD, VIDEO, AUX
- ⇒ TAD connector for mono In and Output for modem Audio
- ⇒ 1 MIC Input
- ⇒ Stereo LINE Output/ Speaker Output

20 dB MIC Amplifier

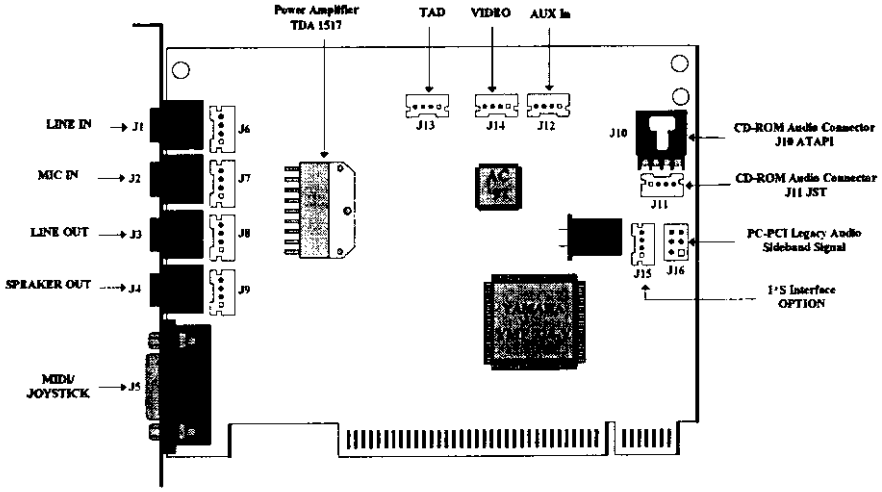
Analog Characteristics

- ⇒ A/D S/N: 85 dB
- ⇒ D/A S/N: 90 dB

Low Power Consumption

6 Watt Power Amplifier

1.2. Card Figure



1.3. Connectors

This PCI Sound Card includes up to seven internal connectors, four external Jack Ports, one external MIDI/ Joystick connector, one VIDEO connector, one VOICE Modem connector, one I² S Interface, and one PC-PCI Legacy AUDIO SIDEBAND SIGNAL connector.

1.3.1. External Connectors:

J1:..... Ø 3.5mm Phone Jack for **LINE IN.**
J2:..... Ø 3.5mm Phone Jack for **MIC IN.**
J3:..... Ø 3.5mm Phone Jack for **LINE OUT.**
J4:..... Ø 3.5mm Phone Jack for **SPEAKER OUT.**
J5:..... Connector for **MIDI/JOYSTICK.**

1.3.2. Internal Connectors:

J6:..... Internal connector for **LINE IN.** (optional)
J7:..... Internal connector for **MIC IN.** (optional)
J8:..... Internal connector for **LINE OUT.** (optional)
J9:..... Internal connector for **SPEAKER OUT.** (optional)
J10:..... Connector for **IDE CD-ROM AUDIO IN.** (ATAPI)
J11:..... Connector for **IDE CD-ROM AUDIO IN.** (JST)
J12:..... Connector for **AUX.**
J13:..... Connector for **TAD/VOICE MODEM.**
J14:..... Connector for **VIDEO IN.**
J15:..... Connector for **I S Interface** (optional)
J16:..... Connector for **PC-PCI Legacy Audio SIDEBAND SIGNAL.**

1.3.3. Audio Connectors:

J10: ATAPI CD-Audio

L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J11: CD-Audio

L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

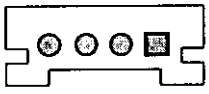
J12: AUX

L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J13: TAD/Voice Modem

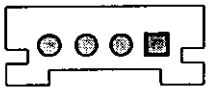
1 PHONE IN
2 GROUND
3 GROUND
4 MONO OUT

J14: VIDEO IN



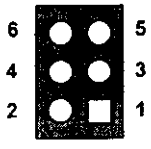
L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J15: I² S Interface



1 SERIAL DATA 1
2 SERIAL CLOCK
3 SERIAL DATA 0
4 GROUND

J16: PC-PCI



1 PCGNT #
2 GROUND
3 N.C.
4 PCREQ #
5 GROUND
6 SERIRQ #

2. HARDWARE INSTALLATION

2.1. Handling the PCI Sound Card

WARNING: Static electricity can damage your equipment. Do not take the card out of its static protective bag until you are ready to work with it.

Follow these precautions when handling the card:

- Before you open the static protective bag, touch it to a metal expansion slot cover on the back of your computer. This drains static electricity from the package and from your body.
- Do not touch any exposed printed circuitry after opening the package.
- Keep other people from touching the card. They might have a static-electricity build-up.
- Limit your movement. Movement causes a build-up of static electricity.

2.2. Installing the PCI Sound Card

Step 1. Turn off the system and all peripheral devices.

Step 2. Disconnect the power cord and all peripheral devices from the system.

Step 3. Remove the system cover and identify an unused PCI slot.

Step 4. Unscrew the slot cover plate, plug in the PCI Sound Card, and tighten it with the screw.

Step 5. If you have speakers or amplifiers, plug the cable into the **J1** or **J2** Jack on the back of the Sound Card.

Step 6. Depending on what type of CD Audio cable you have connect **J10** or **J11** on the Sound Card and the Audio output at the back of the CD-ROM drive. Make sure pin 1 of **J10** or **J11** is connected to the leftmost pin of the CD-ROM Audio output.

Step 7. Put back the system cover, reconnect the system power cord and all peripheral devices. Check and make sure all connections are correct before you turn on the system.

3. SOFTWARE INSTALLATION

3.1. Software Contents

There is one CD-title which comes with this package, labeled:

"Device Driver for Win 95"

This CD-title includes the necessary device driver for Win95 which you may use.

3.2. Device Driver Installation Under Windows 95

To install the device driver under Windows 95, please follow the steps below:

1.) After you have installed the PCI Sound Card, restart your Windows 95 system.

2.) The **"New Hardware Found"** dialog box will display the message **"PCI Multimedia Audio Device"**. Choose the option **"Driver from disk provided by hardware manufacturer".**

3.) To continue the driver installation, select the appropriate CD-ROM letter and the root directory, for example **"E:\Win95".**

4.) Make sure the dialog box specifies the correct CD-ROM letter and click OK. This will start the copying process.

5.) Follow the on screen instructions and you should be able to install the device driver easily.

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