

DT0398 PCI SOUND CARD

USER'S GUIDE

Table of Content

<u>TABLE OF CONTENT</u>	2
1. INTRODUCTION	3
<i>DT0398 PCI Sound Card Features:</i>	3
<i>System Requirements:</i>	3
2. HARDWARE INSTALLATION	4
<i>Installing the DT0398 PCI Sound Card</i>	4
3. SOFTWARE INSTALLATION	4
<u>3.1 Windows95 Driver Installation</u>	5
3.1.1 Installing DT0398 Sound Card Windows95 Driver	5
(DOS Legacy Mode Included)	5
3.1.2 Verifying the DT0398 Driver installation for Win95	7
3.1.3 Driver un-installation	7
3.2 Windows 98 Driver Installation	8
3.2.1 Installing DT0398 Sound Card Windows 98 Driver	8
3.2.2 Verifying the DT0398 Windows 98 Driver Installation	10
3.2.3 Driver un-installation	10
3.3 Windows NT 4.0 Driver Installation	10
3.3.1 Installing DT0398 Sound Card Driver	10
3.3.2 Verifying the DT0398 installation for Win NT 4.0	13
3.3.3 Windows NT Driver Un-installation	14
3.4 For Machines running DOS	15
4. EZAUDIO™ SOFTWARE APPLICATION	17
4.1 Activating EzAudio™	17
4.2 Play EzAudio™	18
4.3 EzAudio Recording	18
4.4 Playlist	18
4.5 PLAY MIXER	19
4.6 RECORD MIXER	20
5. SETUP UTILITY	20
5.1 CD AutoRun Setup	21
5.2 Manual Setup	22
5.3 System Reboot after Setup	23
6. TROUBLESHOOTING	24

1. Introduction

DT0398 is an advanced audio controller for the PCI Bus. It is compatible with Microsoft Windows, Microsoft DirectX and Thousands of DOS games. Legacy Audio block supports AdLib Music Synthesizer, Sound Blaster Pro, MPU401 UART mode and Joystick function in order to provide highest hardware compatibility for numerous PC games on real DOS environment.

Your PCI Sound card contains the result of many years of experience in PC games, sound and communication development. The sound can be created with FM synthesis and held to a professional performance standard.

This manual contains Hardware and Software Installation guides for you to setup your DT0398 Sound Card and its Driver Software for Win95, Win98, WIN NT4.0 and DOS environment. It also provides the instructions on how to use EzAudio Audio Rack, an easy to use application for playing digital MIDI music, wave sound and CD audio on your PC. There is a "Setup" section in this manual, providing instructions on how to recover, re-fresh and re-install DT0398 PCI sound card drivers in a quick and convenient way. Reader can also use the Setup program provided to install or upgrade sound card drivers.

DT0398 PCI Sound Card Features:

- PCI 2.1 Compliant
- PCI Bus Power Management rev. 1.0 Compliant
- PCI Bus Master For PCI Audio
- AC97 ver. 2.0 Compliance
- Microsoft DirectSound and MMSYSTEM Compliance
- Native DOS Game Support without Software Emulation
- Analog/Digital Joystick Interface
- S/PDIF Output
- Legacy Audio compatibility
- AdLib compatible Music Synthesizer
- Hardware Sound Blaster Pro compatibility
- MPU401 UART mode MIDI interface Joystick

System Requirements:

- Pentium CPU 133Mhz or equivalent
- Windows 95, Windows 98, or Windows NT4.0 or MS-DOS 6.0 or higher
- Windows 95 CD or Windows 98 CD
- Microsoft DirectX version 5 or later
- PCI Bus with one available Bus Master slot
- 16MB of RAM
- Hard disk drive
- 12MB free on your hard disk
- CD-ROM and Audio cable
- Speakers

2. Hardware Installation

Installing the DT0398 PCI Sound Card

NOTE: Carefully examine your PCI Sound Card to make sure there is not any loose or broken component on the card. If the sound card appeared to be damaged, return it to the store for exchange as soon as possible.

1. Turn off the PC and all external peripherals connected to it (e.g. printer...etc.), then remove the PC system cover.
2. Locate an empty PCI expansion slot. Your sound card can be installed in any available PCI expansion slot. A PCI expansion slot can be identified by its approximate length of 3/4". Remove the metal bracket corresponding to the slot you have chosen. Save the screw.
3. Align the PCI sound card to the expansion slot. Hold the sound card by its edges, and without using excessive force or pressing any components on the sound card, insert the card into the slot. Make sure that it is seated firmly and completely in the slot.
4. Secure the PCI card to the expansion slot. Align the notch in the mounting bracket of the sound card with the screw hole in the rear panel of the computer case. Use the screw that you removed from the metal bracket to secure the sound card in place.
5. Connect the required cables to the sound card – there are 3 external audio jacks at the back end of the sound card: line-out, line-in, and mic-in. Connect your speaker cable to the line-out external phone jack. Locate the CD ROM audio connector on the PCI sound card (see Figure 1), and connect the CD ROM audio cable to the sound card.
6. Replace the system cover. You are now ready to boot up your PC system.
7. Proceed to the next section, Software Driver Installation, to install the PCI sound card driver.

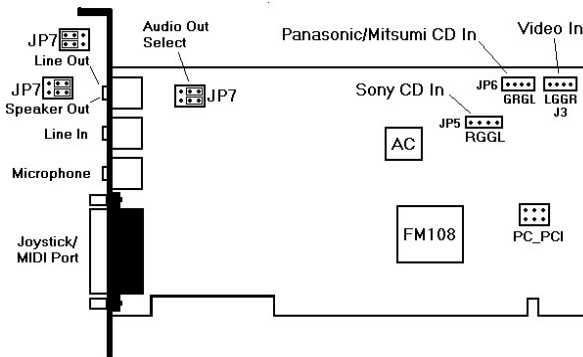


Figure 1

3. Software Installation

The DT0398 PCI sound card has the following driver support,

- Microsoft Windows95
- Microsoft Windows98
- Microsoft NT
- Native DOS

The Win95/98 and DOS drivers were not just designed for the latest Microsoft compliance and direct sound games but also designed to support the legacy DOS SoundBlaster Pro compatible games. The following sections describe the steps on driver installation under different operating systems. User may also use "Setup" in section 5.0 as the alternative way to install driver on their PC.

3.1 Windows95 Driver Installation

3.1.1 Installing DT0398 Sound Card *Windows95 Driver* (DOS Legacy Mode Included)

Note:

- If you have not installed the DT0398 PCI Sound Card, please follow instructions in the previous section, Hardware Installation, to install the sound card. Then proceed to this section on installing the driver.

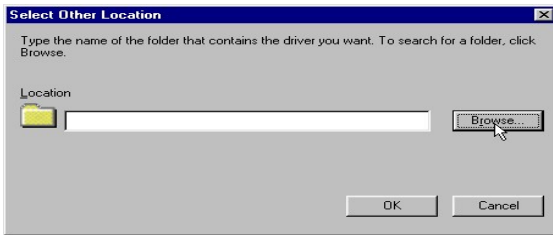
1. After the sound card is properly installed, turn on the PC.
2. As Windows95 starts up, it will automatically detect the sound card and start the driver installation. Windows95 will detect the sound card as “**PCI Multimedia Audio Device**” and prompting for driver installation will begin.
3. At the following prompt, click “**Next**”



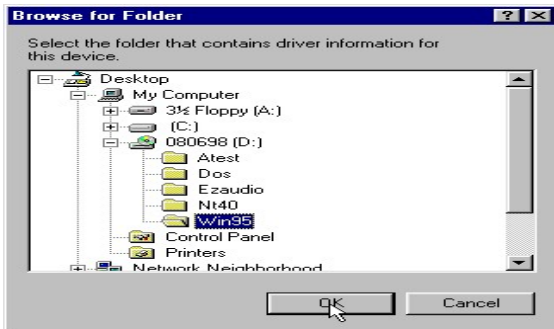
4. At the following prompt, click “**Other Locations**”



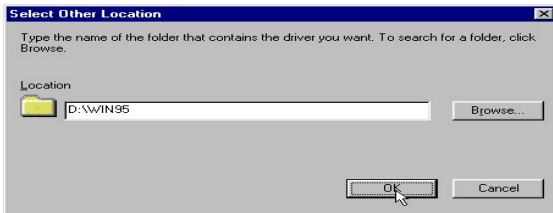
5. At this prompt, click” **Browse**” to locate the driver



6. In this screen, select the Win95 folder as shown. Click “OK”



7. In this screen, the name of the folder containing the driver appears in the Location bar. Click “OK”



8. At this prompt, click “Finish”

9. At this prompt, insert the sound card driver CD in the CD ROM drive. Click “OK”

10. At this prompt, click **Browse** to locate the fmedia.cpl file

11. In this screen, select your CD ROM drive location in the **Drives:** bar to locate the fmedia.cpl file. Click “OK”

12. fmedia.cpl file will appear in the **Copy files from:** bar. Click “OK” Files will start copying automatically.

13. If Joystick has been installed in your system previously, the installation process has completed. If you have not installed any joystick before, the following screens will appear.

At this prompt, insert the Windows 95 CD ROM into the CD ROM drive, and click “OK”

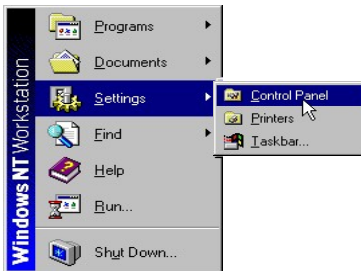


3.1.2 Verifying the DT0398 Driver installation for Win95

1. Open the System Properties screen by right clicking on "My Computer" and selecting "Properties".
2. Click on the “Device Manager” tab.
3. Double-click “Sound, video and game controllers” from the hardware tree to verify the DT0398 installation. You should see at least these four entries: DT0398 Legacy Audio, DT0398 Legacy Joystick, DT0398 PCI Audio Device, and DT0398 PCI Joystick Device.

3.1.3 Driver un-installation

1. To uninstall the DT0398 PCI sound card drivers, first go to the Control Panel by clicking on the **Start** Menu, selecting **Settings**, and clicking **Control panel**.



2. Double-click the DT0398 Icon in “Control Panel”.
3. This brings up the Uninstall Dialog Box. Click on Uninstall.
4. Windows will ask you for confirmation to uninstall the drivers for your DT0398 sound card. Click “Yes” if you wish to uninstall.

Windows will now automatically uninstall all DT0398 drivers. Click “OK” once the process has finished to return to Windows.

3.2 Windows 98 Driver Installation

Your DT0398 PCI sound card is a multi-devices PC peripheral, in order for a successful installation of all the drivers for all the devices, please adhere to the following procedure. Please be aware, the installation program will ask you to do the same procedure twice in order to complete the installation.

3.2.1 Installing DT0398 Sound Card *Windows98 Driver* (DOS Legacy Mode Included)

Note:

- If you have not installed the DT0398 PCI Sound Card, please follow instructions in the previous section, Hardware Installation, to install the sound card. Then proceed to this section on installing the driver.
- The Windows98 driver set is in the CD comes with your PCI sound card.

1. After the sound card is properly installed, turn on the PC.
2. As Windows98 starts up, it will automatically detect the sound card and start the driver installation. Windows98 will detect the sound card as “**PCI Multimedia Audio Device**” and prompting for driver installation will begin.
3. At this prompt, insert the CD disk into the CD-ROM drive, and click “**Next**”



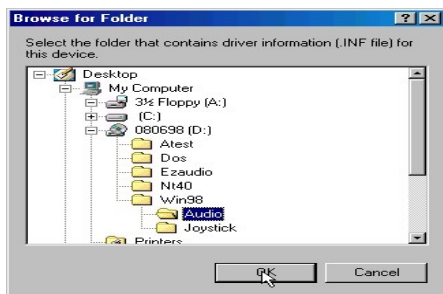
4. At this prompt, if you have not already inserted the driver disk into the floppy disk drive, insert it now. Windows98 will now give you two options to find the right device drivers for the new found sound card. Make sure you choose the top option of letting Windows search for the best device driver and click “**next**.”



5. Now Windows will give you four different options each with a check box for each option. Make sure you check the “**specify a location**” check box and browse for drivers on your disk. Clicks on the “**browse**” option then specify a location by browsing through folders.



6. Open up the folder or directory that contains the drivers and click “**OK**”.



7. Press “**next**” once the specified directory is where the driver is located.



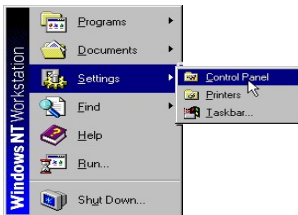
8. Windows will detect the sound device/game device when the driver has been properly located. Press “**OK**” again.
9. Windows now will copy all the files it needs for the first part of installation. And click “**Finish**” when it prompts you to click it.
10. DT0398 PCI Audio/Game Device should be found again. This is the second part of installation. Do the same installation procedure as the previous driver Step2 to Step9 and then the installation is done.

3.2.2 Verifying the DT0398 Windows 98 Driver Installation

1. Open the System Properties screen by right clicking on **"My Computer"** and selecting **"Properties"**.
2. Click on the **"Device Manager"** tab.
3. Double-click **"Sound, video and game controllers"** from the hardware tree to verify the DT0398 installation. You should see at least these three entries: DT0398 Legacy Joystick, DT0398 PCI Audio Device, and DT0398 PCI Joystick Device.

3.2.3 Driver un-installation

1. To uninstall the DT0398 PCI sound card drivers, first go to the Control Panel by clicking on the **Start** Menu, selecting **Settings**, and clicking **Control panel**.



2. Double-click the DT0398 Icon in **"Control Panel"**.
3. This brings up the Uninstall Dialog Box. Click on Uninstall.
4. Windows will ask you for confirmation to uninstall the drivers for your DT0398 sound card. Click **"Yes"** if you wish to uninstall.
5. Windows will now automatically uninstall all DT0398 drivers. Click **"OK"** once the process has finished to return to Windows.

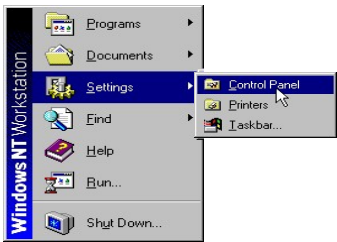
3.3 Windows NT 4.0 Driver Installation

3.3.1 Installing DT0398 Sound Card Driver

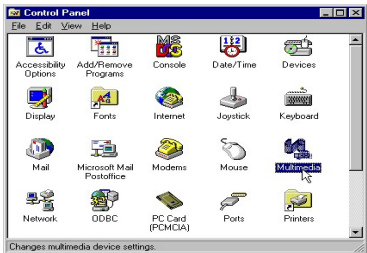
Note: You will need to install both DT0398 MPU401 driver and DT0398 Wave, Mixer, and FM-Syn driver to complete the installation

1. After the sound card is properly installed, turn on the PC

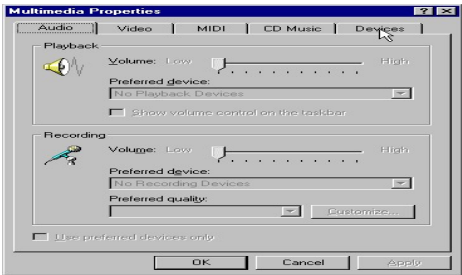
2. Open Control Panel following Start\Settings\Control Panel.



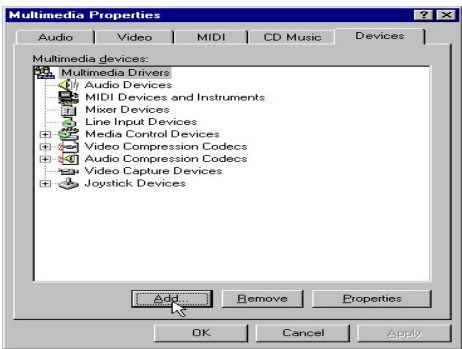
3. Run "Multimedia" applet by double clicking the Multimedia icon.



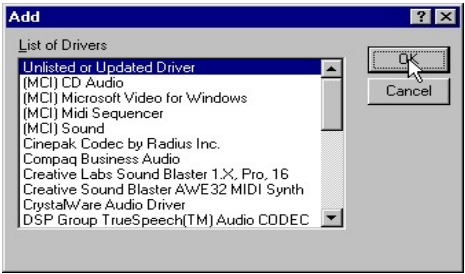
4.0 Install MPU-401 driver. In Multimedia applet, select the "Devices" tab



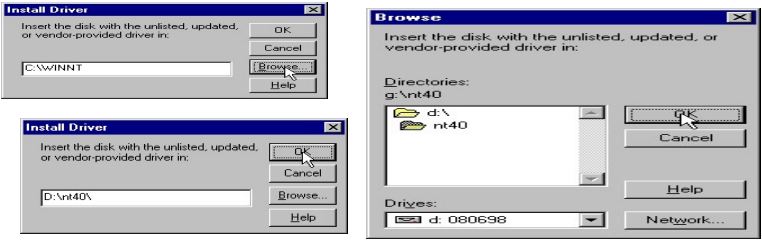
4.1 Click "Add" Button which locates at the bottom of the tab



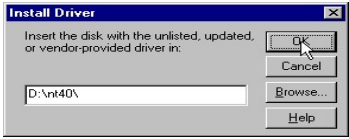
4.2 An "Add" dialogue box is displayed, select the "Unlisted or Updated driver" item, then click the "OK" button.



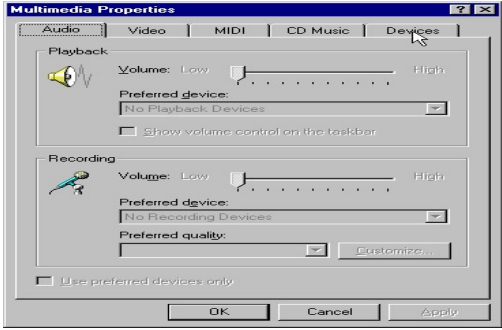
4.3 An "Install Driver" dialogue box is displayed. Insert the NT driver CD into CD ROM. Then search the directory in which driver locates using "Browse", then click the "OK" button.



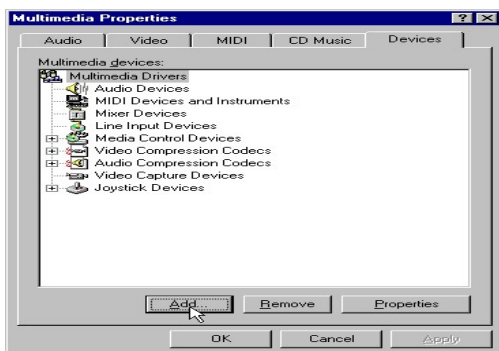
4.4 An "Add unlisted or update driver" dialog box is displayed, select "DT0398 MPU-401" item, then click the "Ok" button to install MPU-401 driver



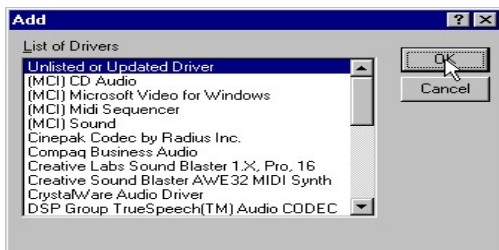
5.0 Install "Wave, Mixer, Fm-Syn" driver. Select the "Devices" tab



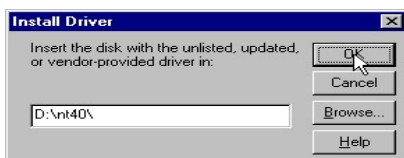
5.1 Click "Add" Button which locates at the bottom of the tab



5.2 An "Add" dialogue box is displayed, select the "Unlisted or Updated driver" item, then click the "OK" button



5.3 An "Install Driver" dialogue box is displayed, enter **D:\nt40** in the edit box, then click the "OK" button. Or search the directory in which driver locates using "**Browse**", then click the "OK" button.

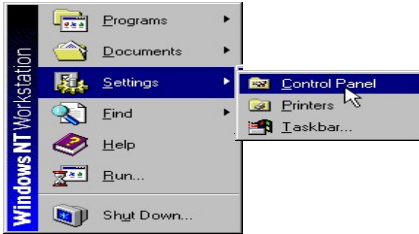


5.4 An "Add unlisted or update driver" dialog box is displayed, select "**DT0398 Wave, Mixer, and FM-Syn**" item, then click the "OK" button to install audio driver.

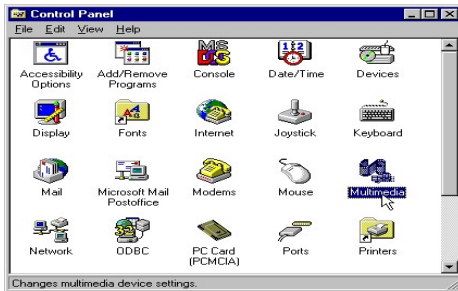
After the driver is installed, system will prompt to restart the computer. Click "**Restart now**" button. Once PC restarted the NT driver installation has completed.

3.3.2 Verifying the DT0398 installation for Win NT 4.0

1. Open the Control Panel screen by clicking on the **Start** Menu, then selecting **Settings**, and then **Control Panel**.



2. Double-click on the **Multimedia** icon.

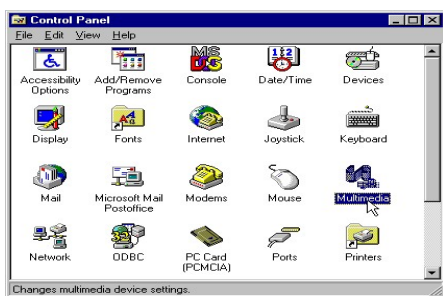


3. Click on the Devices tab to bring up the software tree for multimedia drivers. DT0398 should have installed five drivers as shown:
 - Audio for DT0398 Wave, Mixer, and FM-Syn
 - MIDI for DT0398 MPU-401
 - MIDI for DT0398 Wave, Mixer, and FM-Syn
 - Mixer for DT0398 Wave, Mixer, and FM-Syn
 - Line Input for DT0398 Wave, Mixer, and FM-Syn

If there is a yellow mark on one of the component or a missing component, try uninstalling and then reinstall the drivers. If it still does not work we recommend you contact your board manufacturer.

3.3.3 Windows NT Driver Un-installation

1. Go to the Control Panel by clicking on the **Start** Menu, selecting **Settings**, and then clicking on **Control Panel**. Double-click on the **Multimedia** icon.



2. Select the Devices tab to bring up the software tree of Multimedia Devices. Select the **MIDI for DT0398 MPU-401** driver under MIDI Devices and Instruments. Click on **“Remove.”**
3. Windows will require confirmation before removing this software driver. Click **“Yes”** if you wish to uninstall this driver.
4. After Windows finishes uninstalling the MPU drivers, select **Audio for DT0398 Wave, Mixer, and FM-Syn** under Audio Devices in the Multimedia Drivers tree. Click on **“Remove.”**
5. Windows will require confirmation before removing this software driver. Click **“Yes”** if you wish to uninstall this driver.
6. Windows will now need to restart. Click on **“Restart Now”** to finish the un-installation.

3.4 For Machines running DOS (without Windows)

This package is intended for Machines running DOS with Windows as its operating System. There is DOS sub-directory in DT0398 Software Package containing tools for DOS support.

Installation Procedure for DT0398 Device under Native DOS

- Turn off your PC & insert your PCI sound card
- Turn on PC and reboot system
- At DOS Prompt, type D:\DOS\INSTALL if it is from CD and CD Drive is Drive D:.
- Just follow the procedure of the INSTALL program to finish the Installation
- Since DOS is not a Plug-n-Play OS, Make sure you select the IO/IRQ/DMA which are available and safe for the DOS games.

[DT0398 PCI Sound Card Step by Step DOS Drive Installation]

STEP 1

Please Select SB I/O Port:

I/O 220

I/O 240

ESC. To quit

Please Enter (1~2 or ESC) :

I/O 220 is the recommended setting for this selection

STEP 2 *You may not see this step if your CMOS BIOS have IRQ 5,7,9 assigned to your Sound Card*

Please Select SB IRQ Channel:

IRQ 5

IRQ 7

IRQ 9

ESC. To quit

Please Enter (1~3 or ESC):

IRQ 5 is the recommended setting for this selection

STEP 3

Please Select SB DMA Channel:

DMA 1

DMA 0

DMA 3

ESC. To quit

Please Enter (1~3 or ESC):

DMA 1 is the recommended setting for this selection

STEP 4

You have selected:

I/O Port: 220

IRQ Channel: 5

DMA Channel: 1

Is this ok for your DOS games (y/n) ?

Answer YES if you are sure it's OK.

STEP 5

System needs to reboot for the settings to take effect.

Do you want to reboot [y/n]

YES is the recommended setting for this selection

Troubleshooting

[1] Check list if Sound Card not found or IRQ not assigned to DT0398

- 1) Change Slot: Insert our PCI Audio Card into another PCI Slot. Reboot.
- 2) if problem persists, please Adjust BIOS Settings.
- 3) Adjust BIOS Settings:
 - a. getting into BOIS (usually, hit "F1", "Del" or "F10" after Reboot)
 - b. get into the Section with title "PCI/PnP"
 - c. make sure it reserves enough IRQ for PCI devices
 - d. if there is "Reset Configuration" option, change it to "Yes/Enable".
 - e. if there is "PnP OS" option, change it to "NO".

f. reboot.

[2] Check list if a SB Game is not working

- 1) For the best result of DOS game play and to reduce potential problem(s) of the additional layer of routing. Please change BIOS Setting to reserve PCI IRQ 5/7/9 for PCI Devices.

[3] Adjust SB IRQ/IO/DMA for some DOS Games

- 1) Some DOS games may need certain fixed resource (IO, IRQ and DMA)
- 2) This adjustment can be achieved through the INSTALL program.
- 3) Make sure that IRQ/IO/DMA resource is available, then choose the IRQ/IO/DMA which is good for the games by running the INSTALL again.

4. EzAudio™ Software Application

Introduction

EzAudio™ is a software application developed for the PC music lover through CD, MIDI, and WaveTable features. EzAudio™ provides the overall application-driven capacity in music listening.

EzAudio™ consists of Power ON/OFF controller, CD player, MIDI player, and Wave (digital sound)player and recorder. It also linked with Microsoft Mixer for easy access of volume control.

4.1 Activating EzAudio™

The proper way to activate EzAudio™ is:

1. Double click the EZ Audio icon in the task bar.



2. You will then see the whole appearance of EzAudio™.



EzAudio™ Component Description

- **Power ON/OFF Control**

This component manages and launches the other components. The “Power” button acts as a power switch, when click it, the EzAudio™ application will close itself. EzAudio™ also support the application minimization, so you may shrink it to the bottom of your screen.

- **CD Player**

This component plays audio CDs. The window display shows the track and time.

- **MIDI Player**

This component plays General MIDI Files (a computer music format). The display window shows the file name it play and time it plays.

- **WAVE Player**

This component plays and records WAVE (digital PCM format) files. The recording source can be CD(AUX), MIC, MIDI or LINE.

- **MIXER**

This component controls all sources volume input & output for playback & recording.








The playback source can be AUX, WAVE, FM, CD, MIC, LINE IN, VIDEO, I²S.

The recording source can be AUX, MIC, CD, LINE IN, MIX or VIDEO.

4.2 Play EzAudio™

The following are the common operations of CD, MIDI, and SOUND. Each component has the following basic functions: **Play**, **Stop**, **Pause**, Fast **Forward**, **Rewind**. The CD player also has **Next** and **Previous** functions.

Component buttons are marked with symbols commonly found on consumer audio players. So, if you have used an audio player before, you will find EzAudio™ operation straightforward.

	Stop
	Pause
	Play
	Scan backward
	Scan forward
	Go to beginning of previous song
	Go to beginning of next song

4.3 EzAudio™ Recording

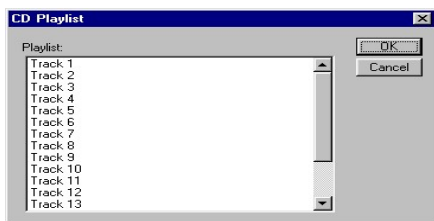
Clicking on the record button on the WAVE component and EzAudio™ will start to record your favor sound or song. To stop recording just simply press the stop button.

4.4 Playlist

The Playlist allows you to arrange CD tracks, MIDI songs, and WAVE sound files into a program of your choice. Playback starts with the first item in the playlist and continues until all items have been played.

The CD Playlist

Clicking the Name button on the CD Component accesses the Name CD dialog box shown below. This allows you to enter the CD title and track number



The MIDI Playlist

Clicking the Name button on the MIDI Component accesses the Name CD dialog box shown below. This allows you to enter the MIDI title and track number.



The WAVE Playlist

To play a .WAV digital audio file you must first insert the files you wish to hear in the playlist. Once you have created a playlist, press OK to close the playlist. Press Play to hear the files in the playlist.



4.5 PLAY MIXER

- For volume control, click the **MIXER** button. The following Volume Control window will appear.
- To adjust the Volume Control, or the applicable Wave/DS, FM-Syn, CD and Mic:
 - Move the corresponding **Balance** dial *left and right*
 - Move the corresponding **Volume** dial *up and down*
- If mute is preferred on particular channel, click inside the corresponding **Mute Box**. To re-activate sound, click inside **Mute Box** again

4.6 RECORD MIXER

- The recording mixer is inside MIXER component. To activate it, first press the MIXER button.



- Then the Master Volume control panel will show up. Press the Option item in the above frame.
- From draw-down menu choose the properties icon.
- From properties control panel, highlight the “**Recording**” icon in the “**Adjust volume for**” windows. Choose the input source then press “**OK**”, you will have record volume control panel appearance.
- To record, the “**Select Box**” has to be checked for the recording channels selected. If one prefer to record all the source at same time, then the “**Mix Balance**” should be choosen.

5. Setup Utility

The Setup utility can be run either through CD AutoRun feature implemented by Microsoft Windows if properly activated, or one may run it manually by executing the Setup program provided in the driver disk or CD.

The utility will give users a flexibility on driver installation. It can be used for the following purposes.

- Install driver before the hardware installation.
- One step driver installation
- Refresh installation when encounter difficulties on manually installing sound card driver.
- Same utility will also be used for driver upgrading to the newest sound card driver

5.1 CD AutoRun Setup

The AutoRun setup feature can only run with CD. The floppy version of driver does not support this feature. This utility will enable you to install drivers for Windows 95, Windows 98 and DirectX 5.0 engine for the DT0398 PCI sound card. As the CD is inserted (assuming the auto-insertion feature is enabled under your Windows operating system) the DT0398 PCI sound card driver setup menu will appear on your screen.

1. Select using your pointing device (e.g. mouse) on the correct operating system that you are currently running. Your selection of operating system will be highlighted once the pointing device is on top of it.
2. Once you made your selection the DT0398 PCI Audio Installation menu will appear. Click **next** to continues the setup.



3. When you see the component selection screen make sure you keep the two checked components checked to insure proper installation.



4. Once the files are done copying make sure you **reboot** the system to insure that the files are updated correctly.



Congratulations!! The DT0398 PCI sound card drivers has been successfully installed.

Note: At this point if your sound card has already been installed in your system, you should hear an audible sound coming from your speakers. (make sure your speakers or headphone are connected to the sound card and properly turned on)

5.2 Manual Setup

This setup utility will search your system and update your system with the new DT0398 sound card drivers. Make sure your sound card is properly installed before you enter this setup utility. If everything is setup right continue to read the detail description of this setup utility.

Manual SETUP procedure

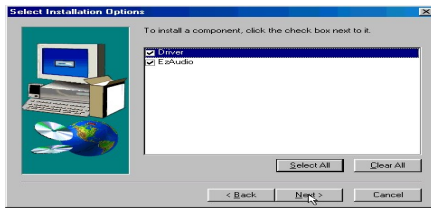
1. First double click on the setup.exe file utility under your driver disk, CD, or the setup.exe file downloaded from our driver library. The following screen will be shown.



2. Click next when you see the DT0398 setup screen comes up.



3. When you see the component selection screen make sure you keep the two checked components checked to insure proper installation.



4. Once the files are done copying make sure you reboot the system to insure that the files are updated correctly.



5.3 System Reboot after Setup

1. After the system reboots it should detect our PCI Multimedia Device and prompt you to click on the next button.
2. Windows98 will now give you two options to find the right device drivers for the new found sound card. Make sure you choose the top option of letting Windows search for the best device driver.



3. Now Windows will give you four different options each with a check box.

Make sure you uncheck any boxes that is already checked for the installation to work right! Then click on Next to continue.



4. Windows should find the driver that was originally installed in the system from the setup utility. Click Next to continue the setup
5. After next is clicked Windows will install the correct drivers found from our setup and will prompt you to click finish.
6. After the first part of the installation has been completed DT0398 PCI Audio/Game Device will come up again. This time it is for the installation of the Game Device (joystick). Simply repeat the steps for the first part of the installation and it will be installed the same way.

6. TroubleShooting

If your DT0398 PCI sound card is not functioning, as it should, don't panic. The problem is probably very simple to find and fix as long as you remain calm and approach the situation methodically.

The secret to troubleshooting is to examine the evidence you have, gain as much information as you can, and eliminate possibilities one by one. In most cases, the source of the problem will soon become clear.

For example, if DT0398 PCI sound card works fine when you remove all other cards from your computer, but it stops working when you replace your fax-modem, there may be a conflict between the sound card and the fax-modem (such as port address or IRQ).

Often, problems are extremely simple: bad cable things not plugged in or turned on, etc. Check the obvious first, not last.

Configuration Problems

Adding new hardware and software to your computer requires ensuring that there are no conflicts with your existing system. If you have difficulty with the installation procedure or are unable to make the card work, a conflict may be present. There are three major configuration settings to consider: I/O Port Address, Interrupt Request lines (IRQ), and Direct Memory Access channels (DMA).

Even though the DT0398 PCI sound card is a plug and play card, the presence of other legacy cards can still cause resource conflicts. To resolve such conflicts, it is important to know the settings of other cards (it is best to remove other sound cards) and peripherals currently in your system, including the mouse, fax-modem, video accelerators, etc. Many peripherals come with setup software similar to DT0398 PCI sound card that lets you see and change the current configuration. There are also utility programs that investigate and report on the configuration of your system

and its peripherals. In either event, make a record of the settings used by all the peripherals in your system for reference when installing new hardware and software or trouble shooting problems.

Generally, you will only have a DMA conflict if your system contains another sound card or an external CD-ROM drive.

DMA Channels and PCI?

Under Windows 9x, the DT0398 PCI sound card is capable of full duplex. This means that the card can playback one .WAV file while recording another. With the PCI bus full duplex is possible without any DMA channels.

There is no microphone support in the MS-DOS Mode and therefore only a single DMA is required for legacy emulation.

Problems When Using Two Sound Cards

Having another sound card in your system in addition to the DT0398 PCI sound card will greatly increase the chances of having system conflicts. We highly recommend that any other sound devices and their associated Windows drivers be removed before installing the DT0398 sound card.

Why are some of the Windows Multimedia Components (i.e. Media Player) Missing?

If you install the DT0398 PCI sound card after Windows 9x is installed Windows will not install the sound utilities that you would expect to find. Features such as the Audio CODEC, the Media Player, and the Microsoft Mixer may not be present. This may cause your sound card not to function properly, even when our drivers are installed. If this is the case, these applications must be installed onto the system from the Windows 9x installation media.

Audio Problems

If the DT0398 PCI sound card and drivers are properly installed with no conflicts, yet there is no sound, the problem may be with your audio connections. Here are some suggestions:

Try playing both a .WAV file and a .MID file to ascertain that there is no sound at all coming from the speakers. If you hear one and not the other, the problem is internal and has nothing to do with your audio system.

Be sure that your monitoring system is properly set up. Try connecting a sound source other than DT0398™, such as an audio CD player, and establishing whether or not you can hear it.

Be sure that the sound card is properly connected to the monitoring system (a 1/8-inch mini-phone cable should be running from DT0398 PCI sound card Line Out connector to a line input on the monitoring system). To eliminate the possibility of a bad cable, try plugging a pair of high-impedance headphones to the DT0398 PCI sound card Line Out jack and see if you hear any sound.

How do I change volume and balance levels in Windows 9x?

To make adjustments to DT0398 PCI sound card volume settings and balance levels, use the EzAudio Mixer. The Install Wizard adds the EzAudio icon to your taskbar. The EzAudio Mixer can be invoked by double clicking on its icon located on the right side of the taskbar.

Microphone Records At Very Low Levels, With Distortion, Or Not At All?

For ease of installation, we recommend that you use a dynamic microphone. These require the least amount of setup. Do the following steps to be sure that your software is set up correctly for MIC input:

1. In your toolbar, next to the clock, double-click on the EzAudio icon.
2. Under the Recording panel of Mixer make sure MIC is checked.
3. Make sure the MIC slider is all the way up, the mute box is not checked and the Boost box is checked.
4. If you experience distortion with a dynamic microphone adjust the volume levels of the Microphone and Master audio devices.

Why doesn't my CD audio work?

- First, be sure that your CD volume is turned up to the maximum in the Mixer.
- If you still aren't getting music, you will need to verify that the internal patch cable is connected between your CD ROM drive and the sound card's CD Input. This is typically a small connector with four wires coming out of it.
- Another tip is to obtain a 1/8" stereo patch cord and connect one end to the "headphone out" on the front of the CD-ROM drive, and the other end to the Line Input on the back of the sound card. Make sure the headphone volume dial on the CD-ROM drive is at maximum, and try playing a CD. You should hear the music playing. If your internal patch cable is missing or defective, contact your CD-ROM manufacturer for information on how to obtain another cable.

Problems with Games

- Make sure that you have the game set up in a music option that the DT0398 PCI sound card supports.
- If the game takes advantage of DirectX or DirectSound be sure that you have the latest DirectX drivers from Microsoft.
- If you are having a problem with external joystick or gamepad, make sure that the Joystick is enabled and the Windows 9x Gameport Joystick drivers are loaded and working properly in the Device Manager.
- In order to use two joysticks, you will need to use a SoundBlaster-compatible Y-connector (such as Radio Shack part # 26-380), or use an industry-standard MIDI Joystick kit. This will make allowances for the proper direct connections for dual joysticks.

If sound card is not found or IRQ is not assigned to DT0398 PCI sound card

Change slot: insert the PCI audio card into another PCI slot. (Do so by first shutting down the computer. Remove the sound card and insert it into another PCI slot.)

If problem persists: If you are a new user, uninstall the driver and re-install it from the beginning. (For uninstalling instructions, see "UN-installing the DT0398 driver" section below.)

Adjust BIOS settings: get into BIOS (usually, hit "F1", "Del" or "F10" after Reboot), get into the Section with title "PCI/PnP", make sure it reserves enough IRQ for PCI devices. If there is a "Reset Configuration" option, change it to "Yes/Enable", if there is a "PnP OS" option, change it to "NO"

Reboot.

If SB Game is not working

DOS games run best with PCI IRQ 5/7/9 assigned to sound card. This can be verified through "Control Panel"/"Device Manager"/"Sound, Video, and Games"/"DT0398 PCI Audio".

For the best results of DOS game play and to reduce potential problem(s) of the additional layer of routing, change BIOS setting to reserve PCI IRQ 5/7/9/10 for PCI Devices.

Some old DOS games may not work in a Windows DOS Box. If this is the case, shut down the system to MS-DOS mode and play the game in Real DOS mode.

Adjusting SB IRQ/IO/DMA for some DOS Games

Some DOS games may need certain fixed resource (IRQ and DMA)

This adjustment can be achieved by selecting the following path: Control Panel (*from the Windows Main Menu, click the Start button located at the lower left hand corner, select Control Panel from Settings*) / System / Device Manager / Sound, Video, and Games / Legacy Audio Device

Click "Resource" Tab to change the Legacy Audio Device I/O, IRQ, and DMA

Potential traps with Win95 OSR2 Driver Installation from Floppy:

Win95 will pop up a box with a big cross "X" and ask for "Driver Disk." In this case just click "OK"

Win95 will then look into the wrong directory to copy files. Win95 will look into the default WIN95 CD directory instead of the floppy. Just change the directory from CD to floppy. This will correct the problem.