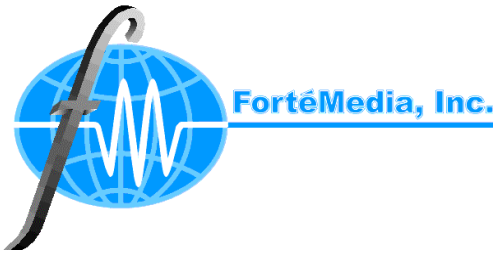


FM801 PCI SOUND CARD

USER'S GUIDE

v. Q3D202

System Requirements

- Pentium CPU or equivalent*
- Windows 95, Windows 98, 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 (32MB if you use software wavetable with 4MB sound library)
- Hard disk drive
- 12MB free on your hard disk
- CD-ROM drive and Audio cable
- Speakers

*Wavetable software bundled package recommends Pentium 166 or higher

Disclaimer

Congratulations! You have purchased a PCI Sound Card that will bring you endless enjoyment in playing SoundBlaster games, computer music, and many more features! With this Sound Card you will experience the latest audio technology….. so get ready to be impressed!

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, used, 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 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 or relocate the receiving antenna
2. Increase the distance 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/television technician for help

Table of Content

1. Introduction

Why PCI Sound Card?

The PCI bus is far superior to the ISA bus. It is capable of transferring data on a wider 32-bit bandwidth bus. This allows much more data to pass from the PCI bus to the host processor. The ISA bus is only capable of 16-bit bandwidth transfers. Using the PCI bus will allow up to a 20 times increase in speed over much slower DMA transfers on the ISA bus. This drastically reduces the overhead on the host CPU. This tremendous processing power opens up new possibilities for sound cards. Real-time software based sound fields are now possible without bogging down the host CPU.

Features of FM801 PCI Sound Card

- PCI 2.1 Compliant
- Soft MPEG-II Support
- Microsoft DirectSound and MMSystem Compliance
- 128-voice Software WaveTable Synthesizer support Available
- Superior 3D positional Audio Support
- Creative Environamental Audio (EAX) game titles Compatible
- Native DOS Game Support without Software Emulation
- Analog/Digital Joystic Interface
- Legacy Audio compatibility
- Hardware Sound Blaster Pro compatibility
- AdLib compatible Music Synthesizer
- MPU401 UART mode MIDI interface Joystic

About This Manual

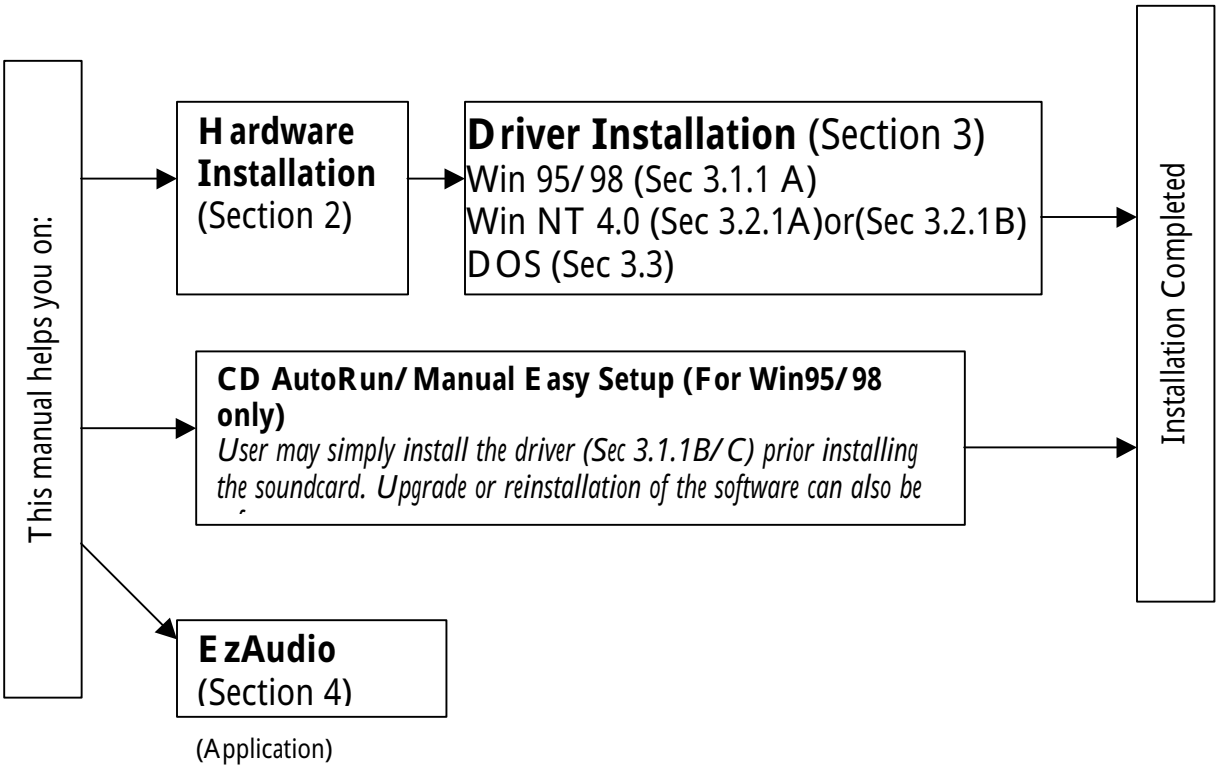
Many people do not read manuals, however, an ounce of caution is worth a pound of prevention, so we do strongly recommend that you take a few moments to go through these pages before installing your FM801 hardware and software.

FM801 is an advanced audio controller for the PCI Bus. ForteMedia, a leader in the PC Multimedia industry, developed the FM801 technology. 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 or wavetable synthesis and held to a professional performance standard. Each sound in the wavetable is derived from real instrument sounds that have been carefully produced for inclusion in ForteMedia's extensive sound library.

This manual contains Hardware and Software Installation guides for you to setup your FM801 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 FM801 PCI sound card drivers in a quick and convenient way. Readers can also use the Setup program provided to install or upgrade sound card drivers.

We strongly recommend you installing the hardware before going to software installation process.



2. Hardware Installation

NOTE: Carefully examine your PCI Sound Card to make sure there is no loosen 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 3¼". 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 below), 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.

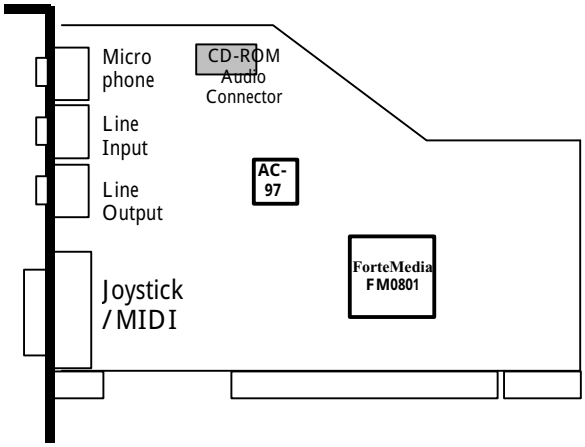


Illustration of 2-Channel card

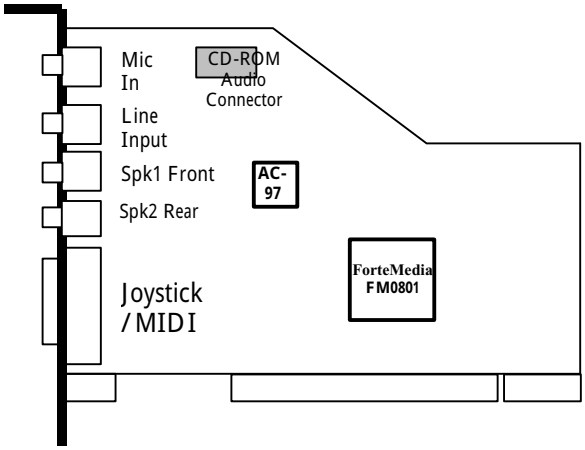


Illustration of 4-Channel card

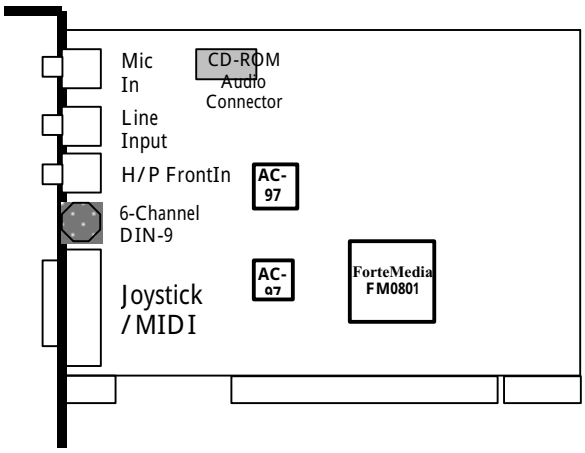


Illustration of 6-Channel card

3. Driver Installation

The FM801 PCI sound card has the following driver support,

- Microsoft Windows95/98
- 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.

Note:

- If you have not installed the FM801 PCI Sound Card, please go back Section 2, Hardware Installation, for FM801 soundcard installation. We strongly recommend you installing the hardware before proceeding the driver installation.
- The driver set is in the CD which comes with your PCI sound card.

3.1 Windows95/98 Driver Installation

3.1.1 Installing FM801 Sound Card Windows 95/98 Driver

Three types of setup procedures available:

- Traditional Setup
- CD AutoRun Setup
- CD Manual Setup

A. Traditional Setup
(DOS Legacy Mode Included)

NOTE:

WHEN WINDOW95/98 FINDS THE PCI MULTIMEDIA AUDIO DEVICE, PUSH THE ESC BUTTON TO CANCEL THE HARDWARE INSTALLATION SCREENS UNTIL YOU ENTER WINDOWS. THIS IS SO YOU CAN USE OUR AUTORUN OR THE SETUP FROM THE CD. THE SETUP/AUTORUN FROM THE CD WILL INSTALL FILES THAT THE NEW HARDWARE FOUND INSTALLATION CAN'T INSTALL. IT IS RECOMMENDED THAT YOU USE THE SETUP/AUTORUN OPTION FROM THE CD.

Note: the following section is based on Win98 operating system. Win 95 users may find some different screens but similar procedures as shown in this section.

1. After the sound card is properly installed and the device driver in the CD-ROM drive, turn on the PC.

2. As Windows95/98 starts up, it will automatically detect the sound card and start the driver installation. Winows95/98 will detect the sound card as "**PCI Multimedia Audio Device**" The Wizard will guide you to begins the driver installation.

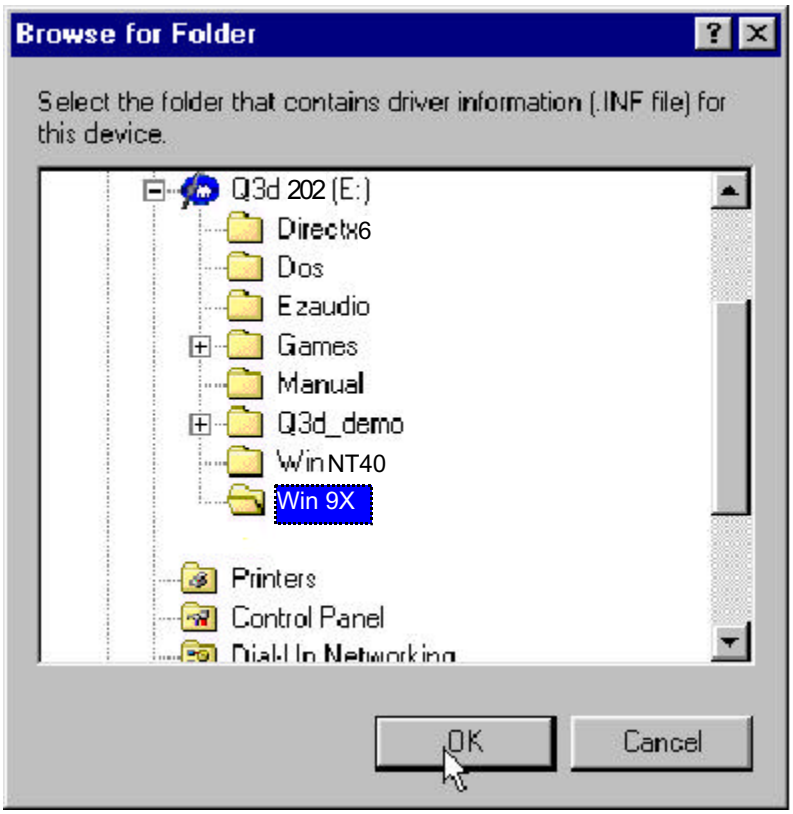
Click "**Next**" to continue.

3. Follow the instruction on the Windows. We recommend you selecting the top option to allow the Window to search for the driver device. Click "**next**." to continue.

(For Win98 users only)

4. Check the "**specify a location**" box. Click the "**Browse"** option to search for the location of the driver.

5. Open up the folder or the directory that contains the driver and click **"OK"**.



Note: Select "Win9X" icon if you are Win95/ 98 user.

6. Press **"Next"** when the location is specified.

7. Windows will detect the FM801 Audio/Game device when the driver has been properly located. Press "**Next**" again.

8. Windows now starts copying the files. Click "**Finish**" to finish the Audio/Game Device installation.

9. FM801 Joystick Device should be found again. This is the second part of the installation. Repeat the same procedures indicated above from step 2 to step 8).

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 flexibility on driver installation. It can be used for the following purposes.

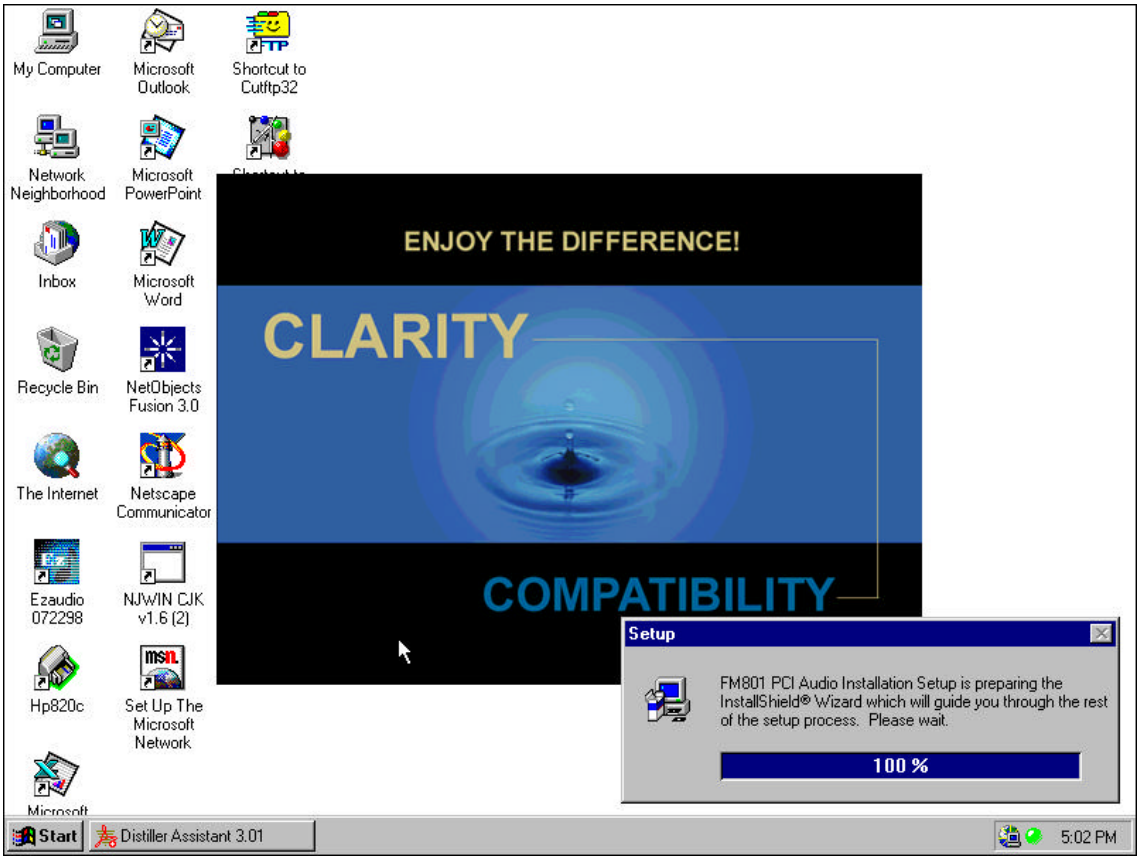
- Install driver before the hardware installation.
- One step driver installation
- Refresh installation when encountering difficulties in manual installation of the sound card driver.
- Same utility will also be used for driver upgrading to the newest sound card driver.

B. CD AutoRun SetUp

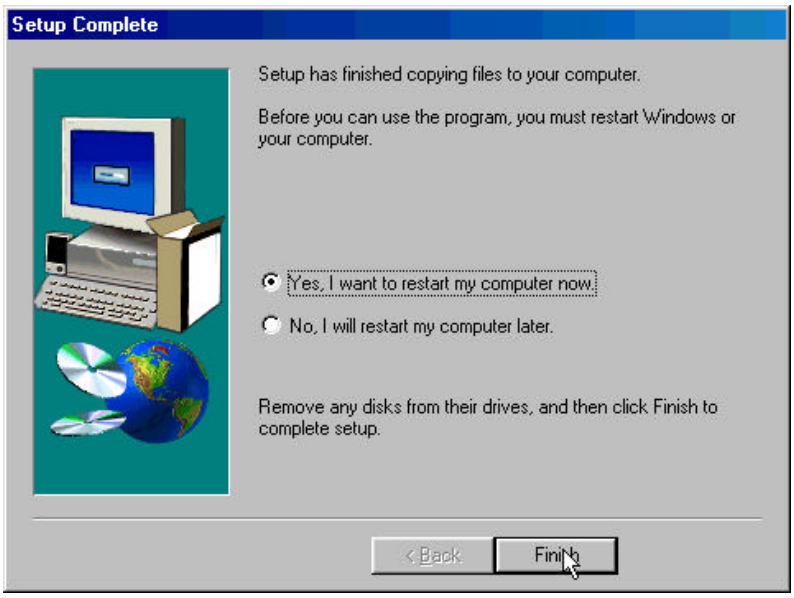
The AutoRun setup feature can only run with CD. The floppy version of driver does not support this feature. This utility will enable you to install drivers for **Windows 95/98 only**, and DirectX 5.0 engine for the FM801 PCI sound card. As the CD is inserted (assuming the auto-insertion feature is enabled under your Windows operating system) the FM801 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 **ENJOY THE DIFFERENCE!** screen will show up for 2 seconds, followed by a **Setup** window which automatically runs the installation.



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

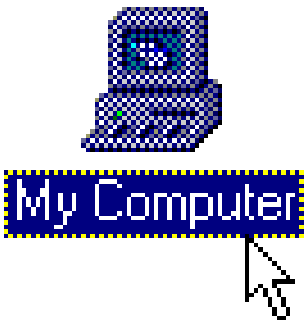


Congratulations!! The FM801 PCI sound card drivers has been successfully installed.

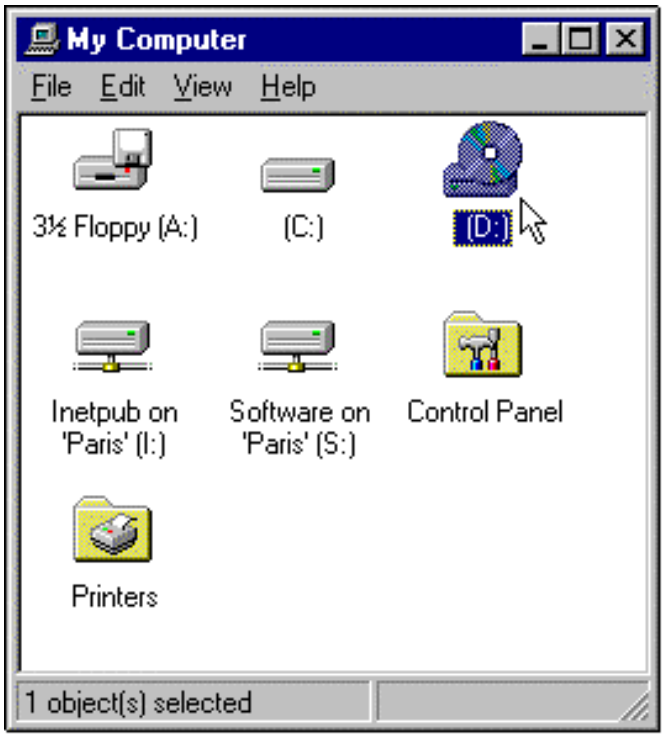
C. CD Manual Setup

This section is mainly for those who are still using the old version of Windows 95.

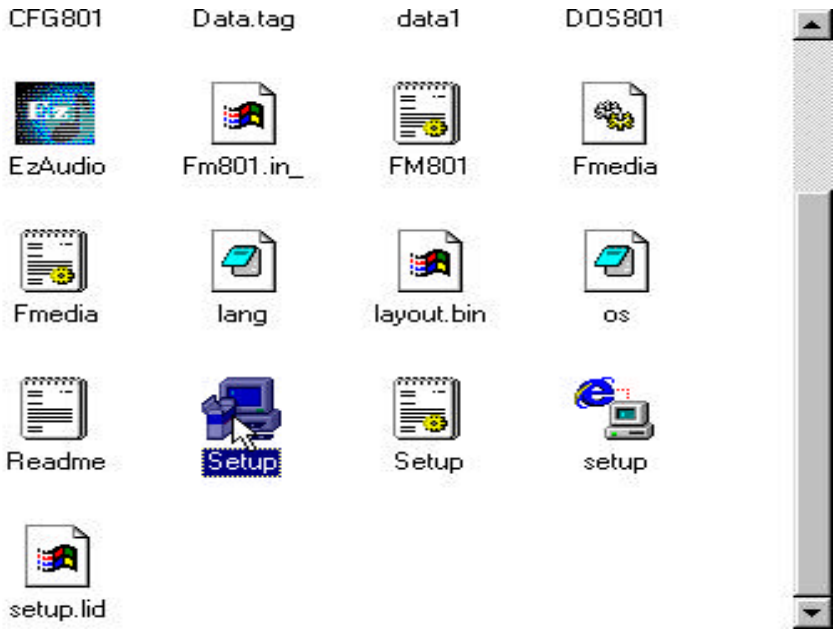
1. Double click on "**My Computer**



2. Double click on your CD-ROM drive. Make sure your driver CD is insterted.



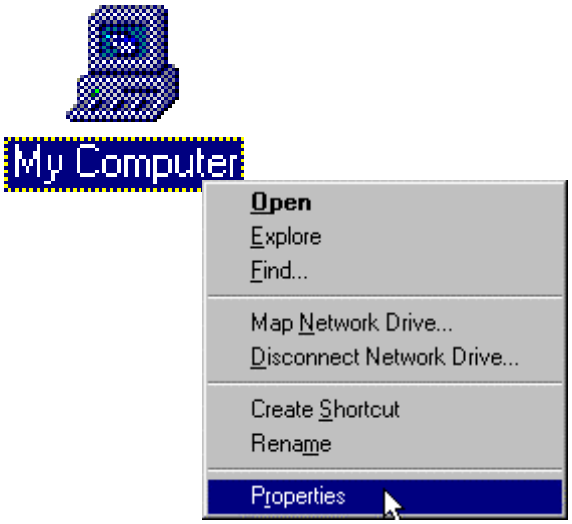
3. Double click on the Setup icon to start the driver installation process.



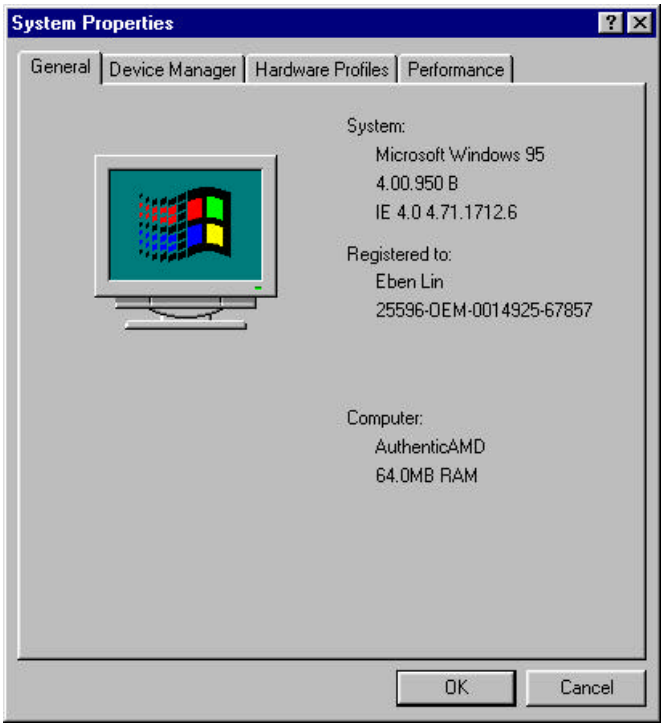
4. Please refer to PP. 14-16 to complete the following **FM801 PCI Audio Installation**.

3.1.2 Verifying the FM801 Driver Installation for Win95/98

1. Open the System Properties screen by right click 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 ForteMedia FM801 installation. You should see at least these four entries: FM801 Legacy Audio, FM801 Legacy Joystick, FM801 PCI Audio Device, and FM801 PCI Joystick Device.

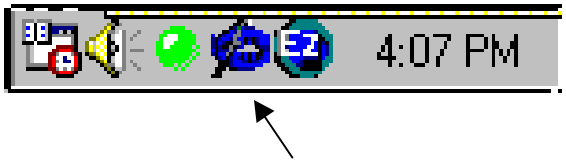
3.1.3 ForteMedia Control Panel

Installing ForteMedia Control Panel on Windows 95/98

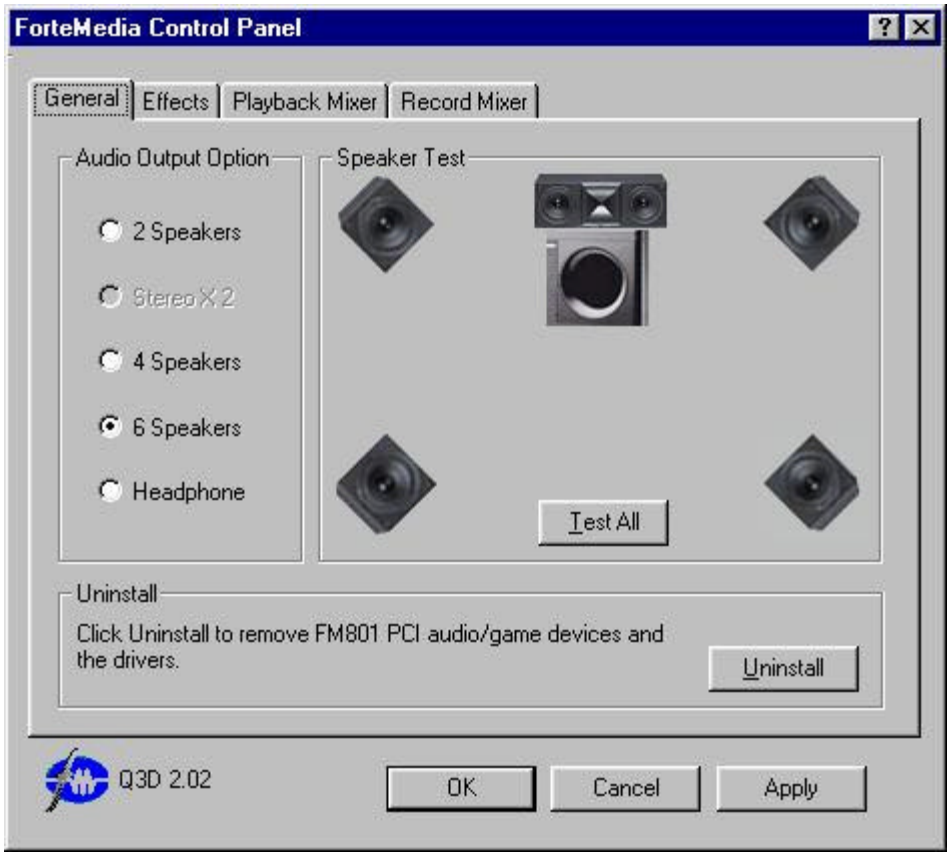
This program should automatically be installed upon installation of the sound card.

Activating ForteMedia Control Panel on Windows 95/98

- Double click on ForteMedia icon locating at the bottom-right corner of your screen.

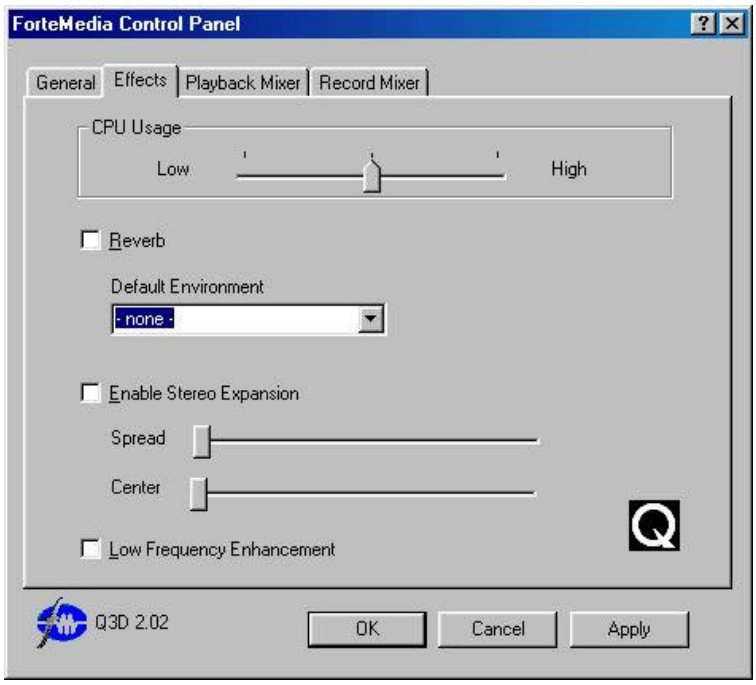


- After double click on FM icon, **ForteMedia Control Panel** window will be displayed. ***General*** allows the user to select and test their speaker settings as well as to remove the installed driver.



*Note: To get **Help on ForteMedia Control Panel,** please move your mouse pointer to where you need to get help. Double click it to display the detail description..*

- **Effects** allows users to configure the settings. CPU Usage is a three-position slider that combines the effects of Elevation and Sample Rate Conversion(SRC). Low CPU Usage results as both SRC and Elevation at off mode. Turning both SRC and Elevation On will result high CPU usage. The center position of CPU usage slider is an indication of turning SRC on while Elevation mode is set at off.



Glossary:

CPU Usage: Low CPU Usage results as both SRC and Elevation modes are turned off. Turning both SRC and Elevation in will result high CPU usage. The center position of CPU Usage slider is an indication of turning SRC on while Elevation mode is set at off.

Elevation: Elevation, especially over speakers, is a fairly subtle audio cue, so that the option of turning elevation processing off to save cycles. It is ONLY relevant to DirectSound 3D games. If Elevation is selected, CPU cycles will be required more, but results in a better audio effect.

Interpolated Sample Rate Conversion(SRC): This improves the quality of sounds that are converted to different sample rates and Doppler efects.

Reverb: The effect that occurs when sound in an enclosed space reflects back to the listener from the surfaces of the room or other enclosure. If the space is large, the initial

reflections may be heard as discrete (separate) echoes. In smaller spaces, the initial reflections arrive too quickly to be heard as separate from the original sound, and are heard as a continuation of it. Turning on the reverberation adds ambient reverberation effects to the processing. Note that this option uses a lot of CPU cycles.

Default Environment: Selects default environment when reverberation effect is turned on.

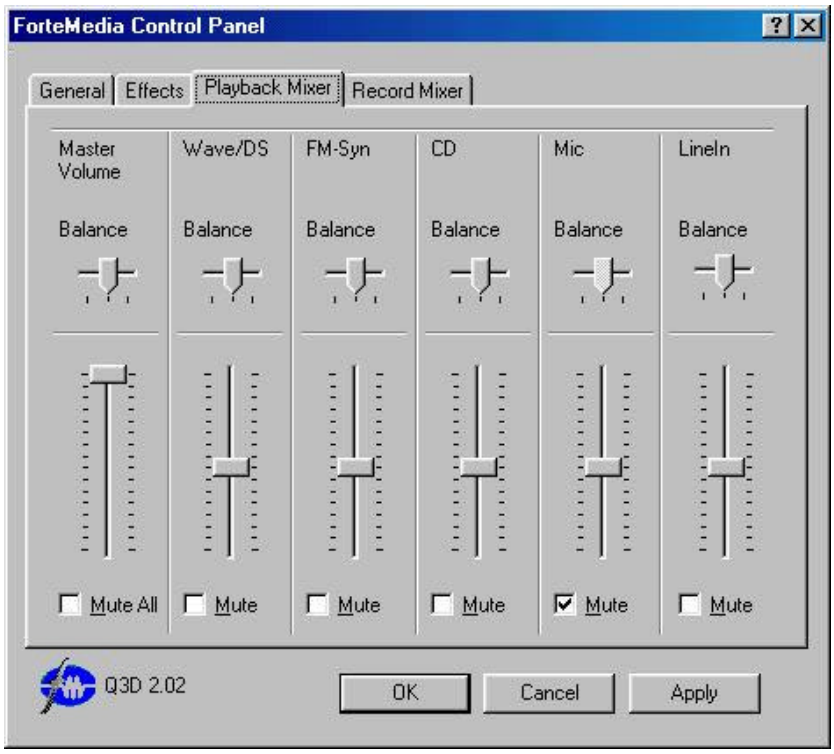
Enable Stereo Expansion: Turn on QXpander, a kind of surround sound. The aural space of stereo audio will be enhanced if this option is turned on. Stereo expansion is available on DirectSound streams only, or can be made available on waveOut streams as well if the driver implements a redirection of waveOut to DirectSound.

Spread: Adjusts the degree of expansion from very subtle to maximum. At the "very subtle" setting (far left) the effect is almost completely bypassed.

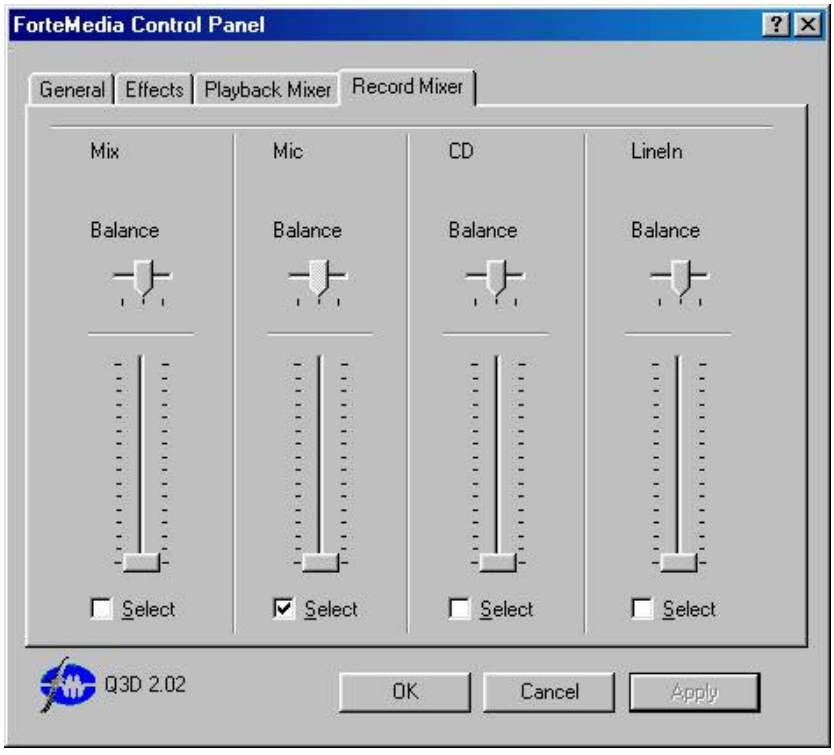
Center: Provides adjustment over the perceived volume ratio between elements of the stereo image that appears in the midle of the stereo image between the speakers, and widely-placed elements. Adjusts the strength of the mono center signal. Less center gives better separation, but with poorer mono response. For music listening, leaving the Center control at maximum is recommanded to avoid attenuating critical elements such as the lead vocal which is almost always located in the center of the mix.

Low Frequency Enhancement (LFE): A "3D bypass" for low frequencies only which are passed directly through to the output without being subjected to 3D processing. LFE is very useful for subwoofers, but for systems without subwoofers, it should be turned off for best positional 3D effects.

- **Playerback Mixer** allows users to configure the mixer mode during music playing from different instruments.

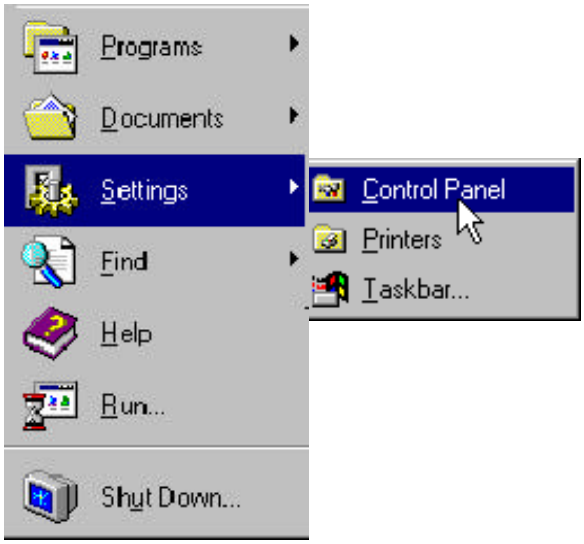


- **Record Mixer** controls the mixer mode setting of recording instruments.



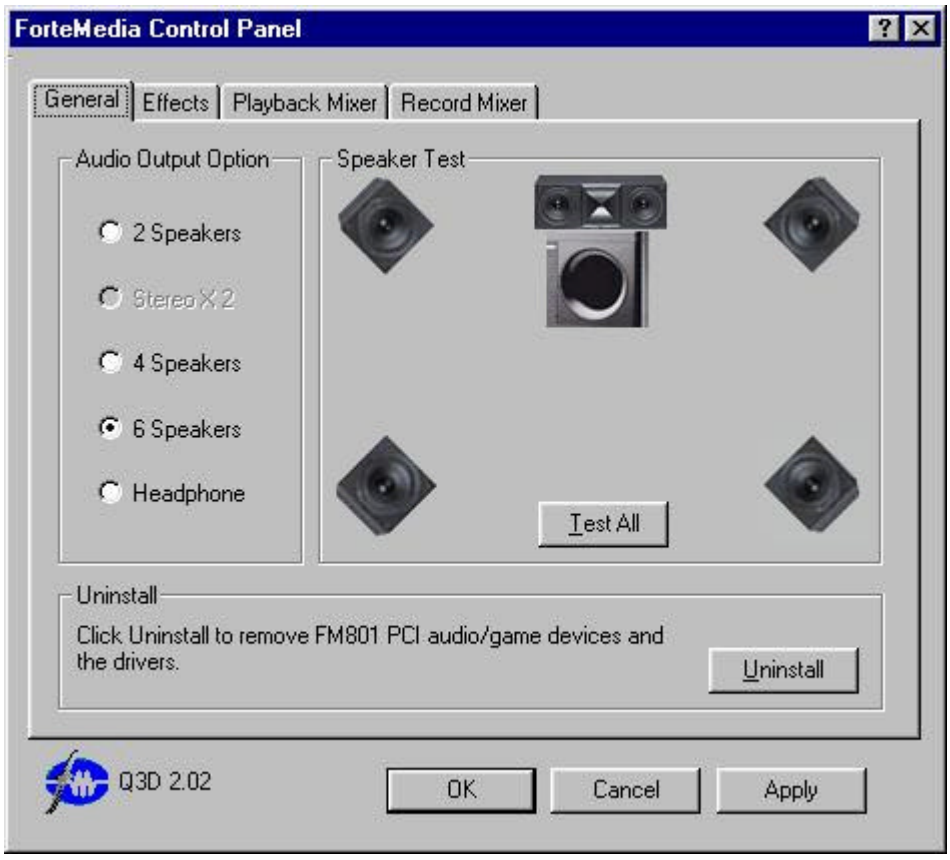
3.1.4 Driver un-installation and Speaker Test

1. To uninstall the FM801 PCI sound card drivers, first go to the **Control Panel** by clicking on the **Start** Menu, selecting **Settings**, and choosing **Control panel**.



2. Double-click on Forte Media Icon in **"Control Panel"**.

3. This brings up the **ForteMedia** Dialog Box. Click on "**Uninstall**" key to disable the driver.



4. To test if the speakers were properly installed, click on "**Test All**"button. Please watch carefully the movement of the music note shown on the screen to verify the correct placement of your speakers.

3.2 Windows NT 4.0 Driver Installation

3.2.1 Installing FM801 Sound Card Driver

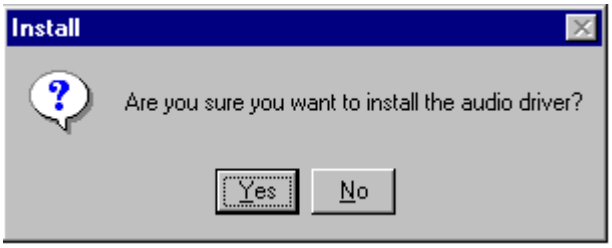
Two types of installations are available: (A) One-Step AutoRun setup or (B) Manual setup.

A. One-Step AutoRun SetUp

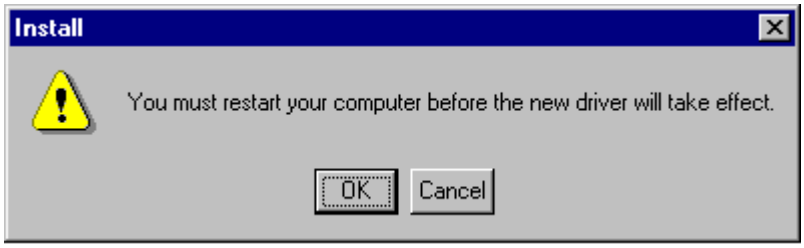
1. After the soundcard is properly installed, turn on your PC and insert the driver CD.

2. Once the driver CD is inserted, the following screen will prompt to start the installation. Select "**Install PCI Audio Driver**" to continue.

3. Select "**Yes**" if you wish to continue the installation. Click "**No**" to quit.



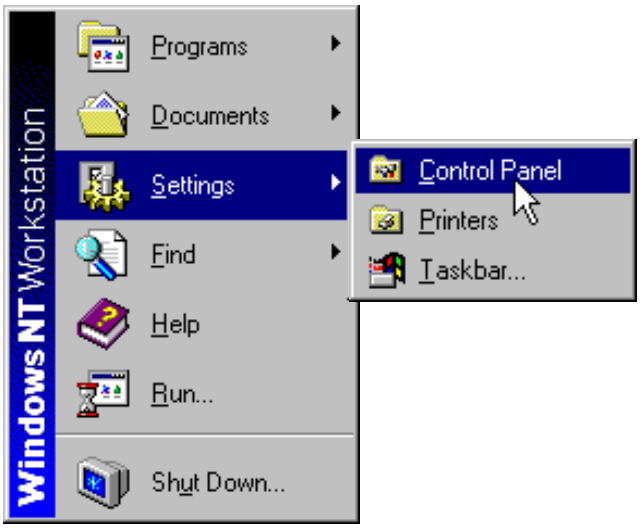
4. Once the driver is installed, please hit "**OK**" to reboot the system to finish installation.



B. Manual SetUp

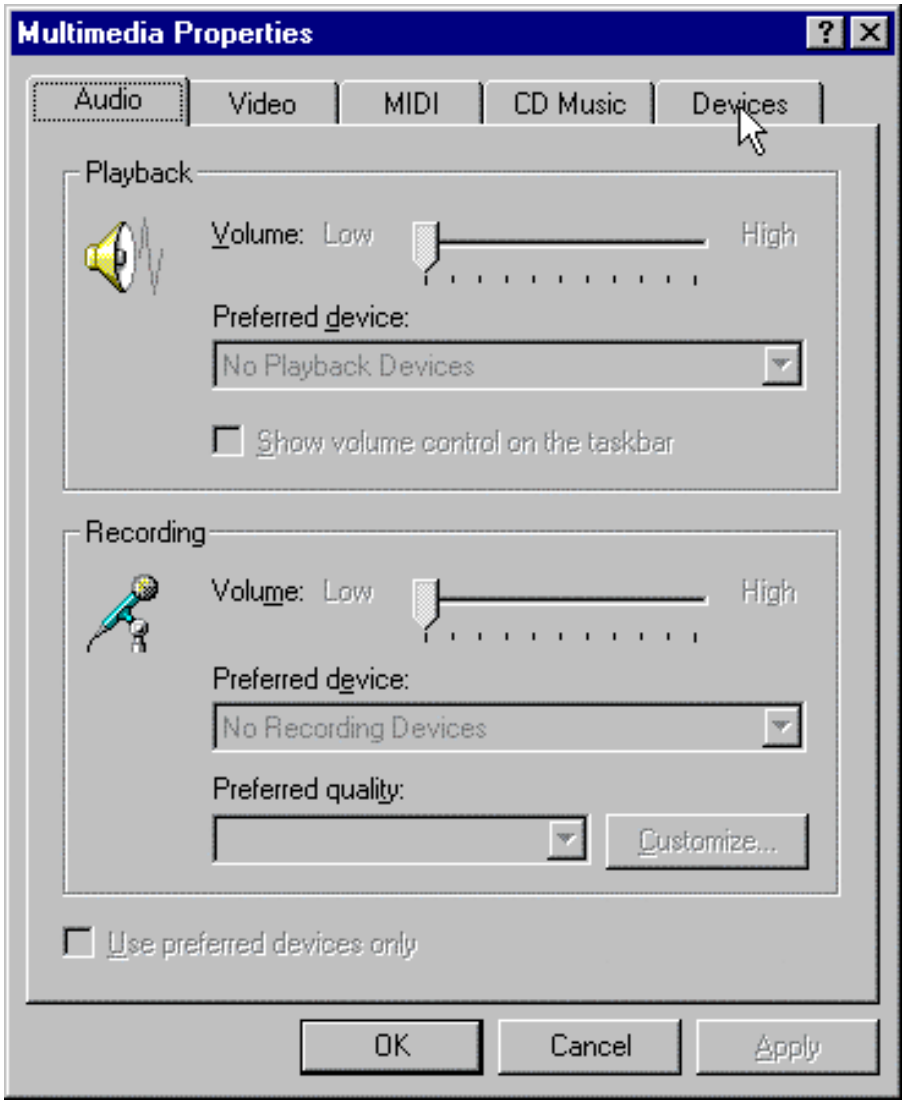
1. After the sound card is properly installed, turn on the PC

2. To open control Panel, please open "**Start**" icon located on the bottom-left corner of your screen, and select "**Settings**", then go to "**Control Panel**".



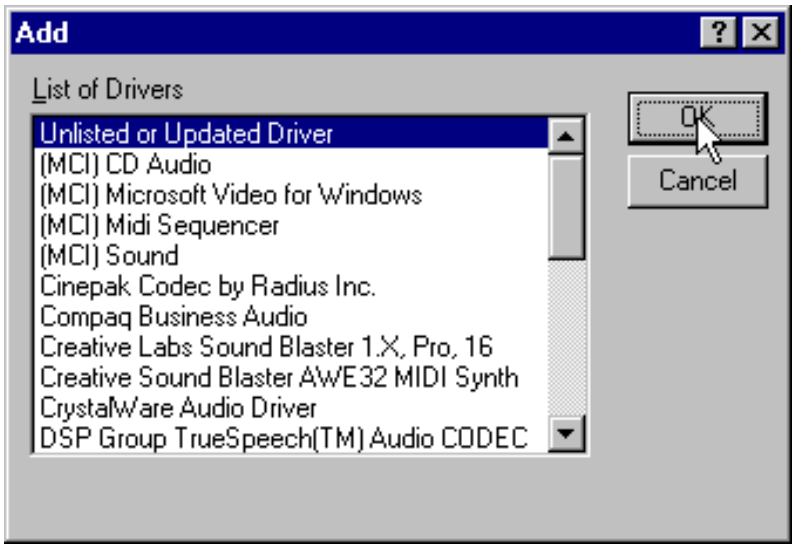
3. Run "**Multimedia**" icon by double clicking the "**Multimedia**" icon

4. To install FM801 Wave, Mixer, and FM-Syn driver, select "**Devices**" tab in Multimedia Properties Window.

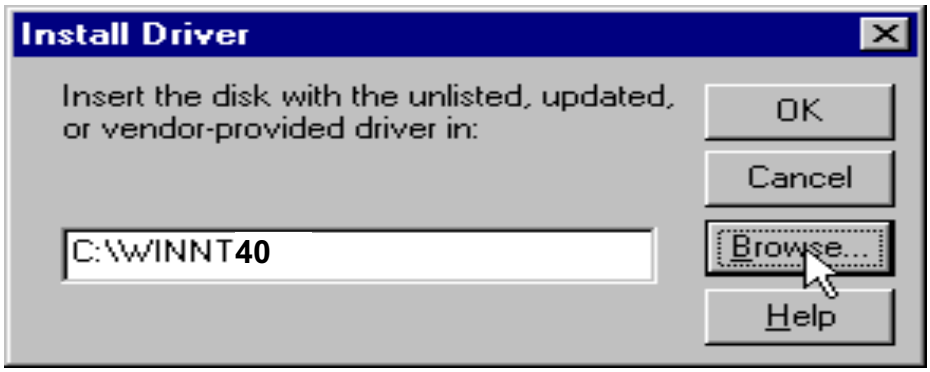


5. Click "**Add**" key as shown below.

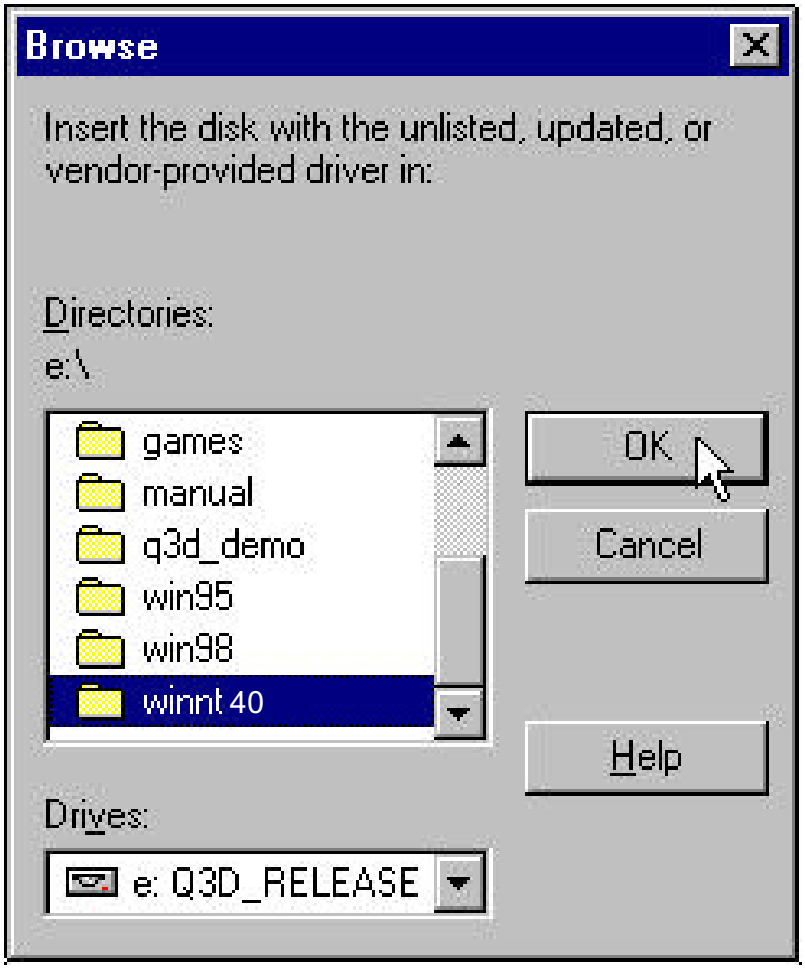
6. An "**Add**" dialogue box is displayed. Select the "**Unlisted or Updated driver**" item, then click the "**OK**" button.



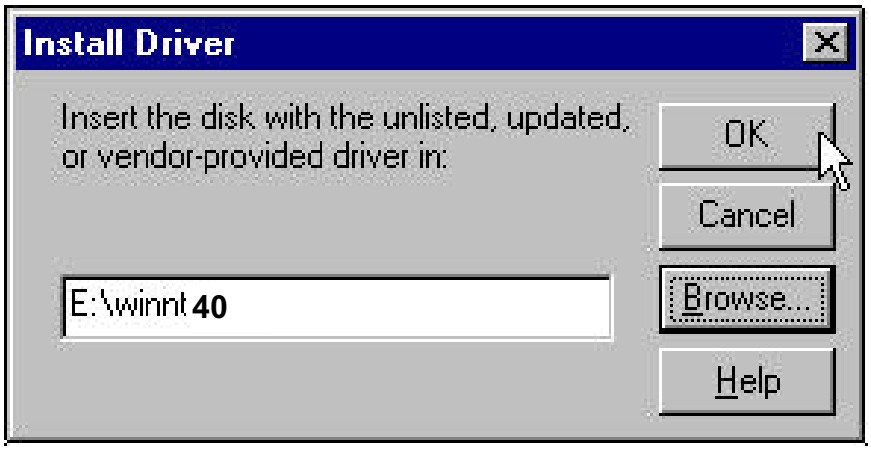
7. An "**Install Driver**" dialogue box is displayed. Insert the driver in the CD-ROM drive. Search the directory in which the driver locates using "**Browse**", then click the "**OK**" button.



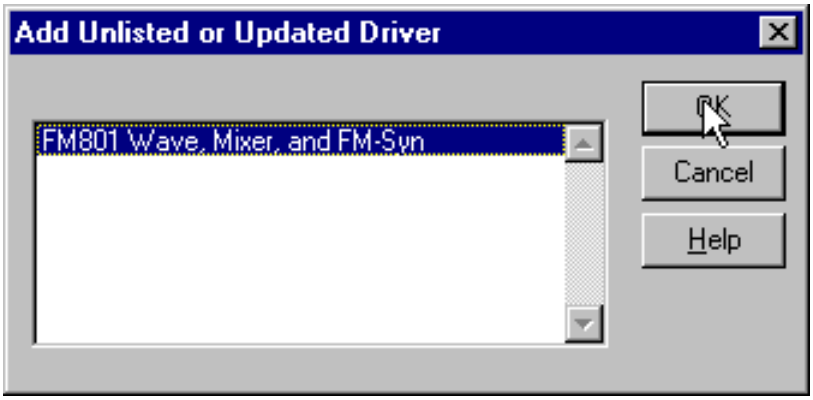
8. Select "**WinNT40**" folder for NT driver installation.



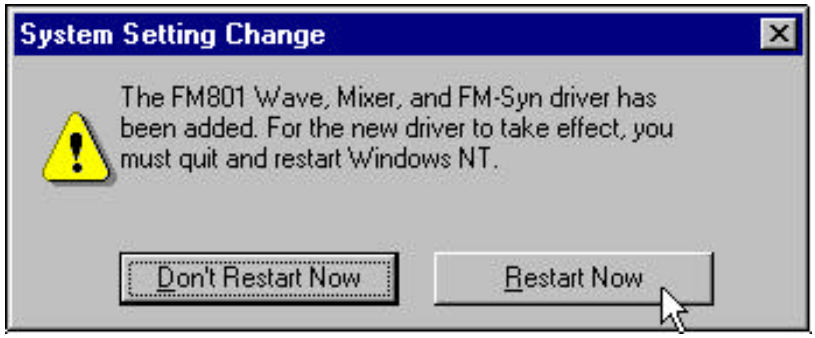

Browse
Insert the disk with the unlisted, updated, or vendor-provided driver in:
Directories:
e:\winnt
e:\
winnt40
OK
Cancel
Help
Drives:
e: Q3D_RELEASE


Install Driver
Insert the disk with the unlisted, updated, or vendor-provided driver in:
OK
Cancel
E:\winnt40
Browse...
Help

9. An "**Add unlisted or update driver**" dialog box is displayed. Select **the "FM801 Wave, Mixer and FM-Syn**" item, then click the "**OK**" button to finiah.

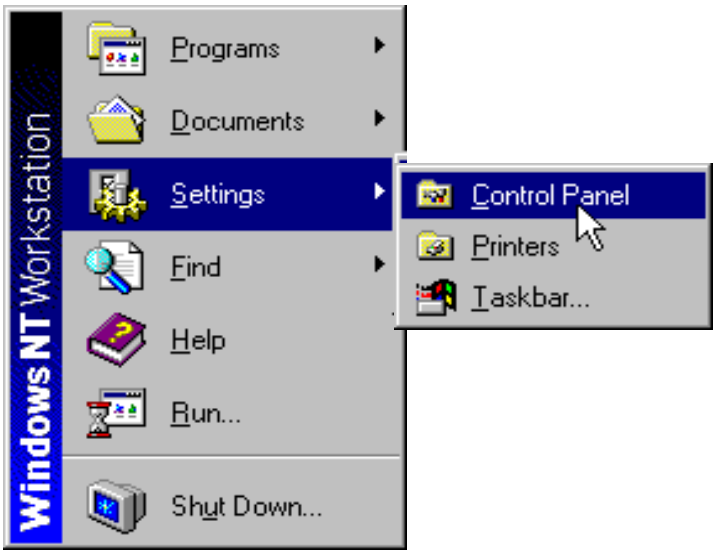


10. Select "**Restart Now**" to reboot your system to complete the installation proccess.



3.2.2 Verifying the FM801 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**.

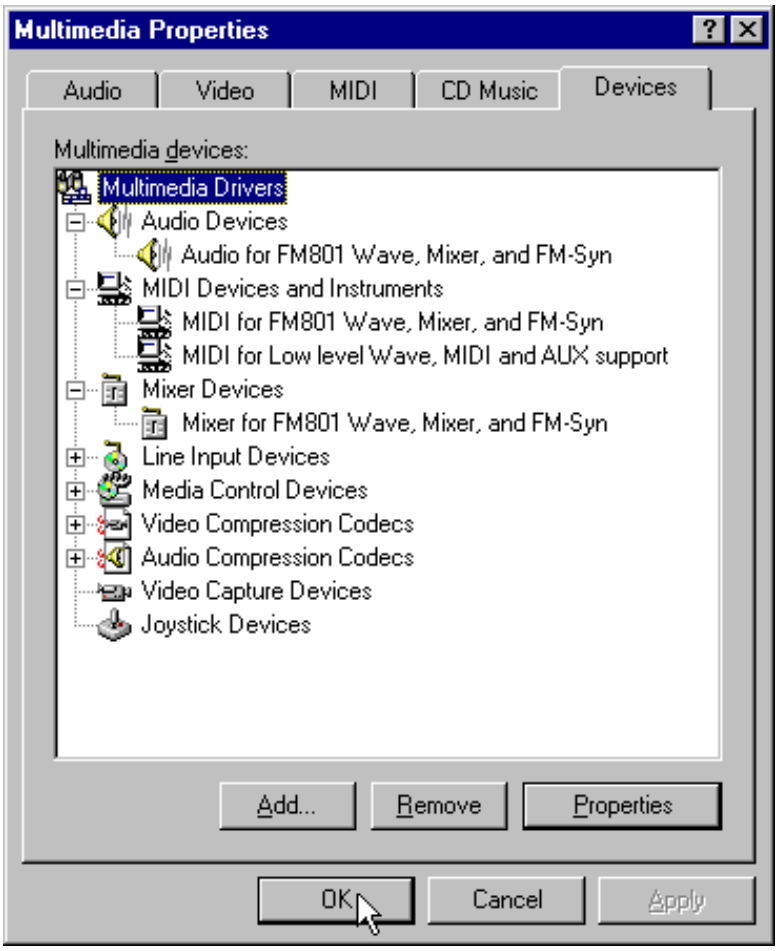


2. Double-click on the **Multimedia** icon.

3. Click on the Devices tab to bring up the software tree for multimedia drivers. FM801 should have installed five drivers as followed:

   - Audio for FM801 Wave, Mixer, and FM-Syn
   - MIDI for FM801 MPU-401
   - MIDI for FM801 Wave, Mixer, and FM-Syn
   - Mixer for FM801 Wave, Mixer, and FM-Syn
   - Line Input for FM801 Wave, Mixer, and FM-Syn

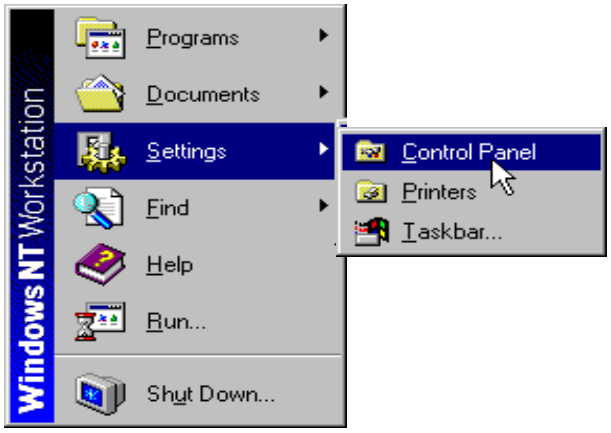
The following confirms a correct installation of the Windows NT drivers.



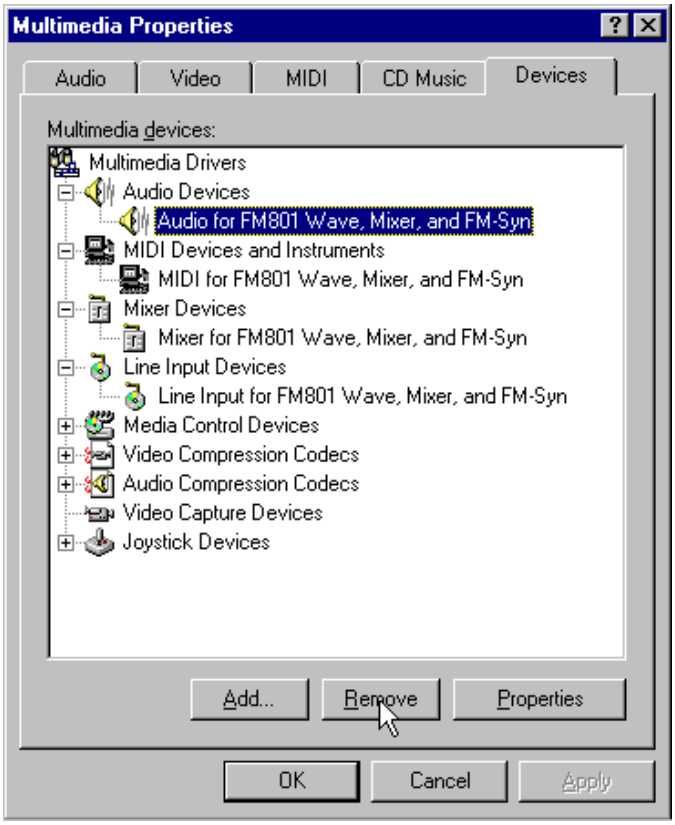
If there is a yellow mark on one of the component or a missing component, try uninstalling and then reinstall the drivers. If it still does not work we recommend you contact your board manufacture.

3.2.3 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**.

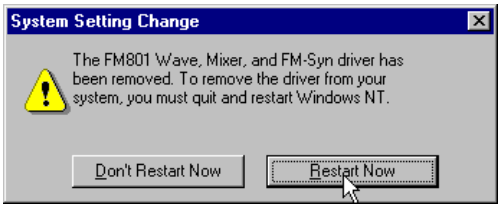


2. Select "**Audio for FM801 Wave, Mixer and FM-Syn**" under Audio Devices in the Multimedia Drivers tree. Click "**Remove**." key.



3. Windows will require confirmation before removing this software driver. Click "**Yes**" if you wish to uninstall this driver.

4. Windows will now need to restart. Click on "**Restart Now**" to finish the un-installation.



3.3 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 FM801 Software Package containing tools for DOS support.

Installation Procedure for FM801 Device under Native DOS

- Turn off your PC & Insert your PCI sound card
- Turn on PC and reboot system
- At DOS Prompt, type A:\INSTALL if from floppy, or type D:\DOS\INSTALL if it is from CD and CD Drive is D Drive .
- 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.

[FM801 PCI Sound Card Step by Step DOS Drive Installation]
FM801 Audio installation for Dos v.1.11

STEP 1
Please Select SB I/O Port:
1. I/O 220
2. 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:
1. IRQ 5
2. IRQ 7
3. 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:

1. DMA 1
2. DMA 0
3. 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 FM801

1) Change Slot: Insert the 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

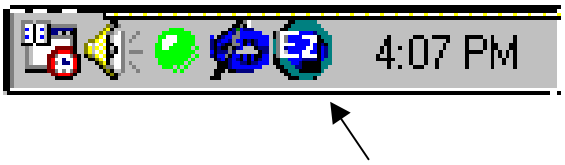
ForteMedia's EzAudio™ is a software application developed for the PC music lover through CD, MIDI, and WaveTable features. EzAudio™ provides the overall application-driven capacity in music listening.

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**

Located at the upper-left corner, this component manages and launches the other components. The "Power" button acts as a power switch, when clicked, the EzAudio™ application will close itself. . EzAudio™ also supports 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 play General MIDI files (a computer music format). The display window shows the file name it plays and times 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, I^2S.
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 favorite sound or song. To stop recording simply press the stop button.

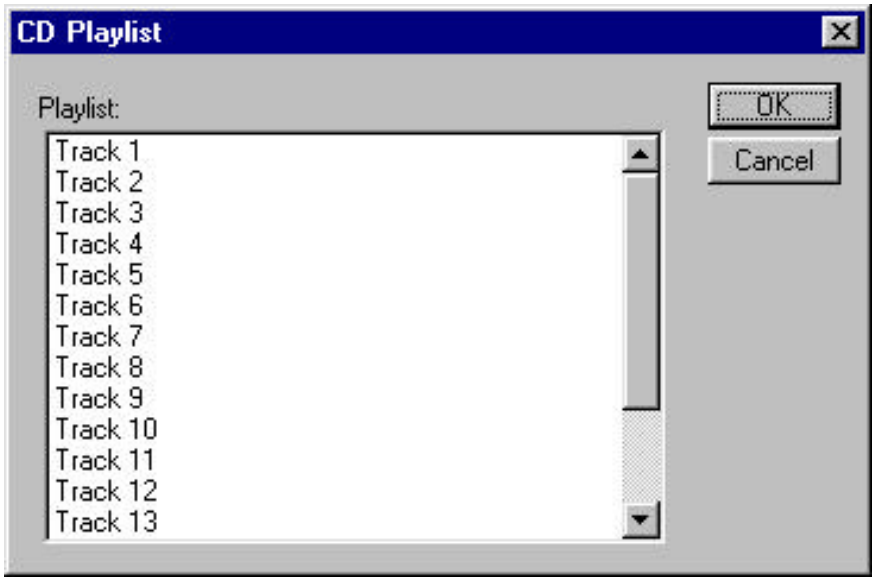
4.4 Selecting CD, MIDI, Or Wave Titles

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

- Place the mouse pointer at the CD Disc tray and click on the icon to access the CD Playlist.

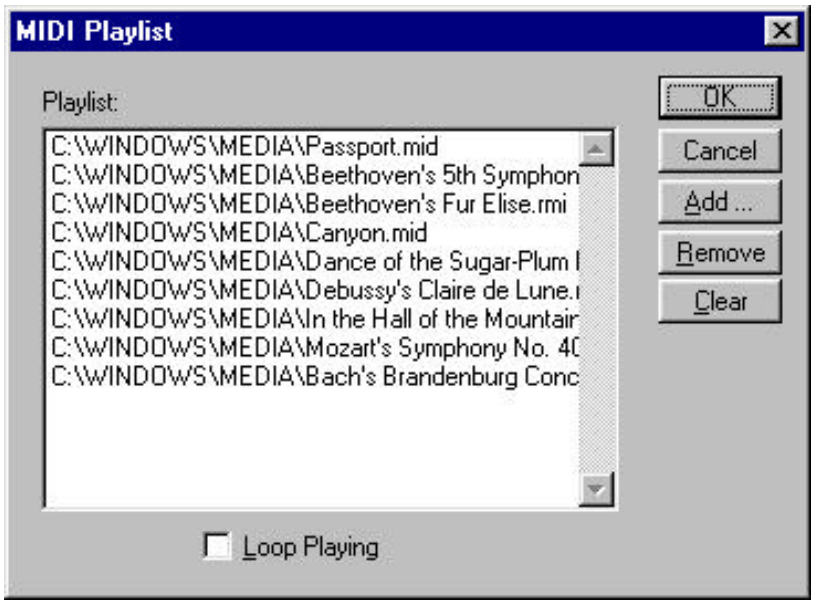
- This allows you to access the Name CD dialog box shown below to enter the CD title and track number.



The MIDI Playlist

- Place the mouse pointer at the floppy-drive icon. Click on the icon to access MIDI Playlist.

- This allows you to accesses the Name MIDI dialogs box shown below. The dialog box allows you to enter the MIDI title and track number.



The WAVE Playlist

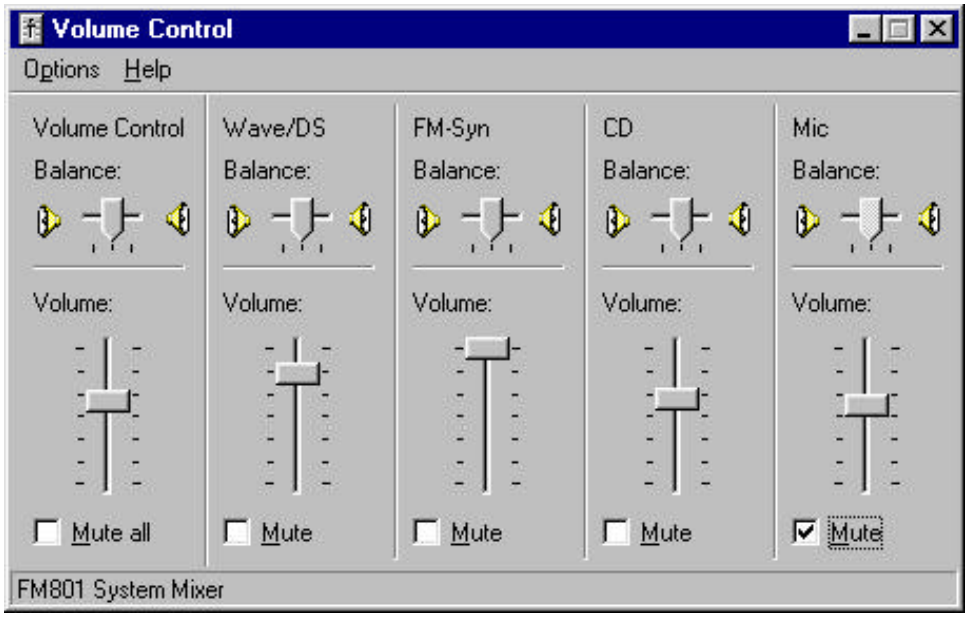
- Move the mouse pointer to the audio-tape door and click on it to access the Sound Playlist.

- 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 to bring out the Volume Control window.

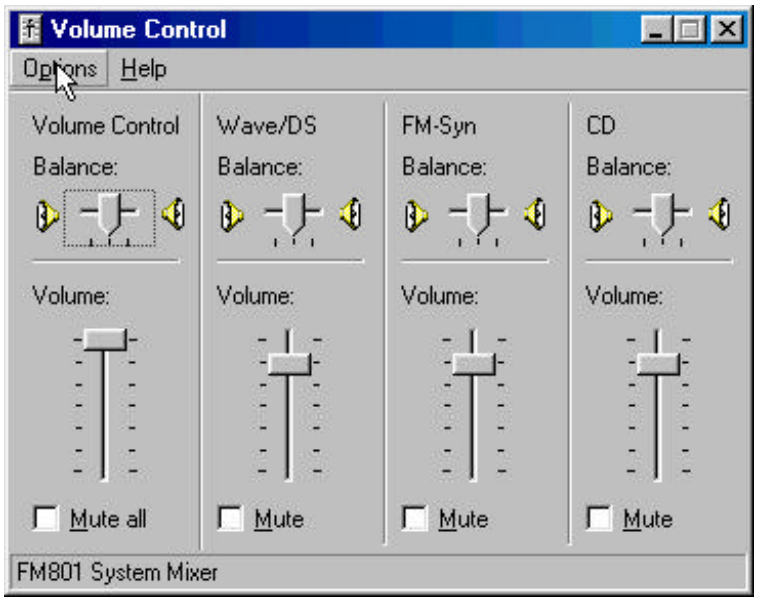
- To adjust the Volume Control, or the applicable Wave/DS, FM-Syn, CD and Mic:
  - Move the corresponding **Balance** dial *left and right*
  - Move the corresponding **Volume** dial *up and down*
- If mute is preferred on particular channel, click inside the corresponding **Mute Box**. To re-activate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



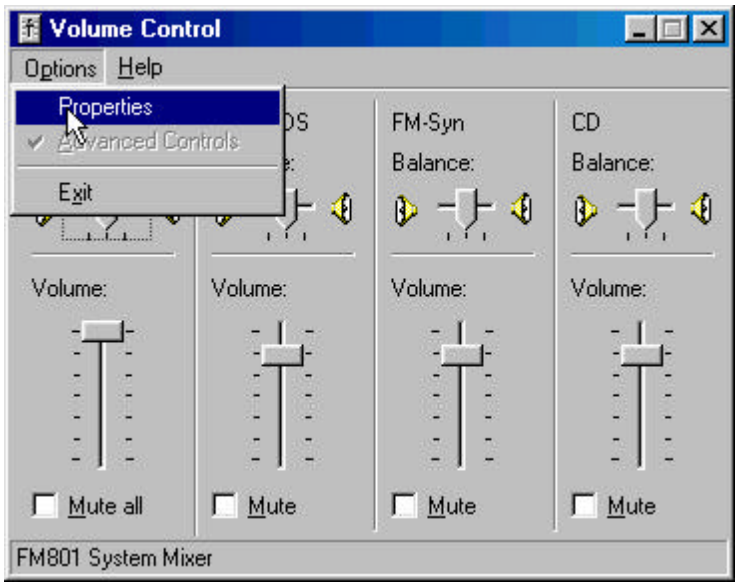
4.6 RECORD MIXER

- The recording mixer is inside MIXER component. To activate, first click on MIXER.

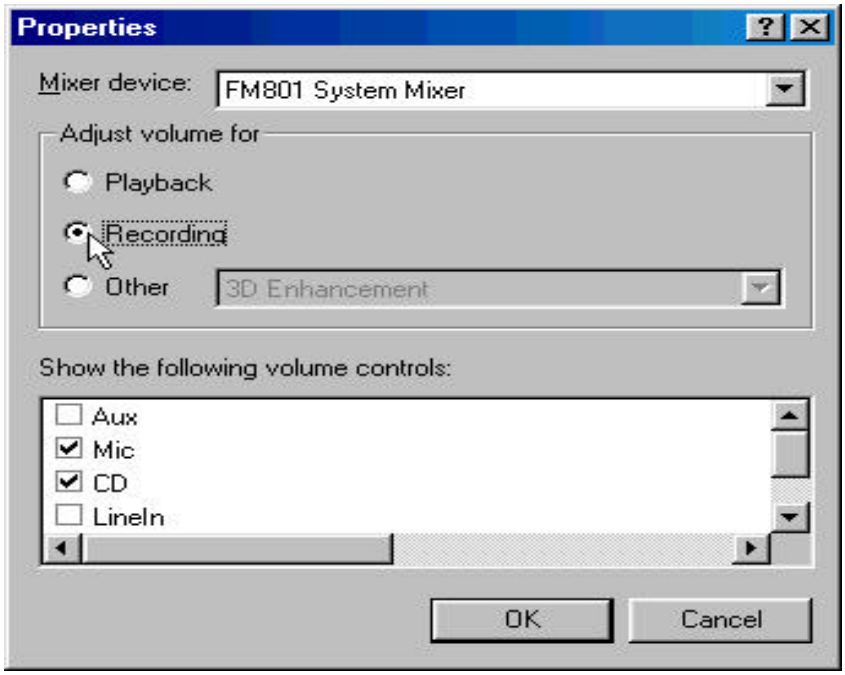
- Select **Options** from the Volume Control Panel.



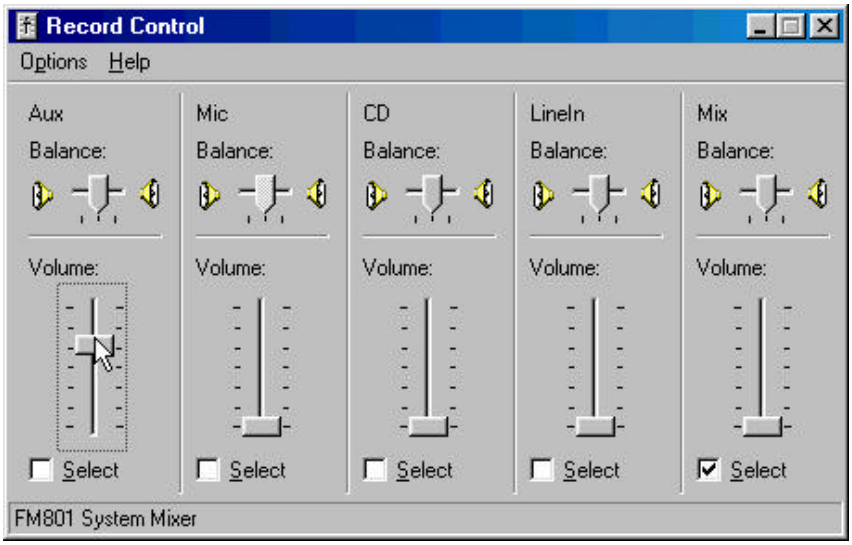
- From drawdown menu choose **Properties**.



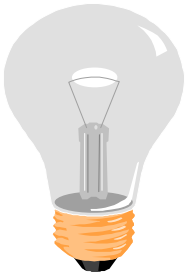
- From Properties control panel, highlight the **"Recording"** box in the **"Adjust volume for"** windows. Choose the input source then press **"OK"**.



- Check the "**Select Box**" for the recording channels. If one prefers to record the entire source at the same time, then the "**Mix Balance**" should be chosen.



5. Frequently Asked Questions & Troubleshooting



The tip for 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 FM801 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 maybe a conflict between the sound card and the fax-modem (such as port address or IRQ). Often, problems are extremely simple: cable not plugged in or turned on, etc. Check the obvious first, not last.

What are the 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 FM801 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 FM801 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.

What are DMA Channels and PCI?

Under Windows 9x, the FM801 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.

What should I do if I have problems with playing games?

Make sure that you have the game set up in a music option that the FM801 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.

Can I install two sound cards?

Having another sound card in your system in addition to the FM801 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 FM801 sound card.

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

If you install the FM801 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 to not 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.

What happened if my FM801 soundcard and driver are both properly installed, yet, there is still no sound?

If the FM801 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 FM801, 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 FM801 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 FM801 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 FM801 PCI sound card volume settings and balance levels, use the ForteMedia 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.

My 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.

My DOS games do not work properly with FM801 based sound card and the system pops up the message "Can't find PCI Chipset Device!" during system boot-up.

If your sound card does not work properly with your DOS games, and you see the message "Can't find PCI Chipset Device!" when the system is executing G801.EXE in AUTOEXEC.BAT, that means your system is using very old generation chipsets. Please open the file C:\AUTOEXEC.BAT to check if there is one line as following: "C:\CFG801". If this line does not exist, it means the driver is not installed properly. Please re-install the FM801 driver again. If this line exists, please change it to "C:\CFG801 /1 /t". In Windows 95 or Windows 98, use "Regedit" under C:\Windows to find one string called 'DOSMODE' and change the value from 00 to 01.

What to do if sound card is not found or IRQ is not assigned to FM801 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 the 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 FM801 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"

The SB Games are not working properly...

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"/"FM801 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.

How to adjust 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

I have bought the sound card with Yamaha software Wavetable synthesizer in the package. But I can not install Yamaha Wavetable synthesizer in my computer.

Please install FM801 Win95 or Win98 driver first before you install Yamaha Software Wavetable Synthesizer. FM801 sound driver has to be installed first in order to install Yamaha Wavetable driver.

Does FM801 support Linux OS?

FM801 supports Windows 95, Windows 98, Windows NT 4.0 and DOS. Linux is not supported by FM801 in the current driver set.

What are the 2-speaker, 4-speaker and 6-speaker Audio Output Options used that can be found in ForteMedia Control Panel?

These buttons are designed for the end users to configure how many speakers have been connected to your sound card. For example, If your sound card is a 4-channel sound card, then you can choose to connect 2 speakers or 4 speakers to your system. The default will be set to 4 speakers. However if you choose to connect to 2 speakers, FM801 sound driver will not allow you to select Quad mode in your QSound Control Panel(for the driver bundled with Q3D only) or in some of the software DVD player setup menu.

Why are two interrupts allocated for my FM801 sound card?

The PCI audio uses one PCI interrupt for operation. Additional IRQ is used for ISA legacy support, an additional to the PCI IRQ.

One PCI IRQ is needed for the audio to function under a PnP operating systems such as Windows 9x. One additional ISA IRQ is dedicated for legacy audio support. Legacy audio support is used for DOS based applications and games that are SoundBlaster compatible. Most DOS based applications and games only use SoundBlaster compatible legacy audio requiring the use of a ISA IRQ. By disabling the ISA legacy audio support in the operating system the dedicated ISA IRQ is freed, thus using only one PCI IRQ. DOS Applications and games that require SoundBlaster Audio support will have no audio output if ISA legacy audio is disabled.

Another way to save one IRQ is to make the BIOS assign IRQ5 or IRQ7 or IRQ9 to FM801 PCI Audio. In this way, ISA legacy audio can also be supported via FM801 PCI Audio. Please refer to BIOS user manual to see the details of how to allocate the IRQ to PCI slots.