Notice

The information in this document is subject to change in order to improve the reliability, design, or function of this product without prior notice and does not represent a commitment on the part of this company.

In no event will the manufacturer be liable for direct, indirect, special, or consequential damages arising out of the use the product or documentation, even if advised of the possibility of such damages.

Trademark Acknowledgments

Microsoft, MS, and MS-DOS are registered trademarks, and Windows is a trademark of Microsoft Corporation. Sound Blaster is a trademark of Creative Technology, Ltd. AdLib is a trademark of AdLib Inc. IBM PC is a registered trademark and PC/XT, PC/AT are registered trademarks of International Business Machines Corporation. All other trademarks and registered trademarks are property of their respective holders and are hereby acknowledged.

Information in this manual is subject to change without notice.

Version 1.0

FCC Compliance Statement

Certified to comply with the limits for a Class B computing device according to Subpart J or Part 15 of FCC rules. See instructions if interference to radio reception is suspected.

FCC WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This device complies with Part 15 of 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.

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:

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

In order for an installation of this product to maintain compliance with the limits for a Class B device, shielded cables must be used for the connection of any devices external to this product.

Hardware/Software Contents

1

Introduction

1.1 Product Overview

The Audio Excel PnP 310 is a stereo 16 bit PnP sound card. It is compatible with Sound Blaster 16 and Microsoft Windows Sound System. Especially it supports Plug and Play function for all interface. The Audio Excel PnP 310 also supports MPU-401 interface for Wave Table Synthesis upgrade and supports 3D surround sound function. What we provide at the side of sound card are line-in jack, micro-phone jack, audio output jack, and a 15 pin D-SUB multiplexed joystick/MIDI connector.

If your PC motherboard BIOS supports Plug and Play (PnP) function, while PC booting, the motherboard PnP BIOS will locate I/O resources for all interfaces automatically to avoid I/O conflict. But, all of your interface cards using I/O resources must support PnP function. Otherwise, I/O conflict still occurs at sometimes due to PnP BIOS cannot find the interface card which does not support PnP function.

1.2 Product Features

- **Special Features**
  ISA bus Plug and Play (PnP)
  device support : WSS, MPU401, GAME PORT, SB16
  3D surround sound
  Full duplex playback and recording
  Support Windows 95 and Window NT 4.0
  Auto hardware switching mode between WSS and SB without program setting

- **Compatibility**
  Windows Sound System
  AdLib/ Sound Blaster 16/PRO/2.0
  MPU-401 UART MIDI
  Wave Table Synthesis
  Meets and exceeds Multimedia PC Level 2 Specifications
- **Digitized Audio**
  16 bit stereo 44KHz sampling rate voice playback/recording
  Full duplex playback and recording
- **Stereo Mixer**
  Stereo analog mixing from CD-Audio, Line-in
  Stereo digital mixing from Voice, FM/Wave-table,Digital CD-Audio
  Mono mixing from MIC
  Software adjustable volume
- **SPDIF(IN/OUT)**
  Support 44.1K digital audio IN/OUT
- **FM Music Synthesizer**
  OPL3 FM synthesizer (4 operators)
  Up to 15 melody sounds and 5 rhythm sounds (20 voices)
- **MIDI Interface**
  MPU-401 MIDI UART mode
- **Game Port**
  Standard IBM PC joystick/game port (dual channel)
  External MIDI port for external MIDI keyboard
- **Wave Table Synthesis**
  MPU-401 interface for Wave Table Synthesis (optional)
- **3D Surround Sound**
  Built-in 3D Surround sound (software control ON/OFF)
- **Software configurable I/O Address, IRQ, DMA channel for all interface (Jumperless)**

1.3 3D Surround Sound

Our 3D surround function takes any ordinary stereo signal as input and produces an output signal with dramatically widened stereo imaging and enhanced realism. And requires no extra speakers or special encoding of input signals.

You can turn 3D sound on or off by program CMMIX.COM at DOS. At Windows you also can turn it on or off by Audio Rack mixer. And you can run Windows applications DEMO3D to test 3D surround sound functions.

1.4 What is SPDIF IN/OUT ?

SPDIF is a digital audio IN/OUT standard. It support a non-distortion stereo 44.1K 16bit digital audio transmission. You can get digital audio through SPDIF IN from CD-Audio digital output or the other digital audio output. You also can output digital audio through SPDIF OUT to those equipment's that accepted SPDIF IN format.

1.5 What is Plug and Play ISA Standards ?

The ISA bus architecture allows allocation of I/O address spaces, DMA channels, and interrupt levels among multiple ISA cards. However, the ISA interface has no defined hardware or software mechanism for allocating these resources. As a result, configuration of ISA cards is typically done with jumpers that change the decode maps for I/O spaces and steer the DMA and interrupt signals to different pins on the bus. Further, system configuration files may need to be updated to reflect these changes. Users typically resolve sharing conflicts by referring to documentation provided by card manufacturer. For the average user , this configuration process can be difficult and frustrating.

A Plug and Play-compliant system can identify the Plug and Play ISA cards and the resources they use, then program these resources so they do not conflict. The conflict-resolution scheme used on Plug and Play ISA cards essentially puts all cards 'to sleep', then reads the card identification and the information about

what the card can do and the resources it requires. This information can include what resources are programmable and over what ranges they can be programmed. With this information, the system can configure the card in a way that prevents conflicts with other cards in the ISA bus.

1.6 Wave-Table Upgrade Board

In Windows 3.1, If you want to output by wave-table (MPU-401 MIDI), please add MPU-401 device drivers at first. Click on “Drivers” icon in “Control Panel” of “Main” group. Click “Add” button and select “ROLAND MPU-401” to add device drivers. After reboot, please click on “MIDI Mapper”icon in “Control Panel” of “Main” group. Select item ‘MPU-401 MIDI’ in ‘Name’ and click ‘Close’ button.

In Windows 95 system, please click "Start" button, and then click "Control Panel" at "Settings" Menu. Double click on the "Multimedia" icon and click "MIDI". In “Single Instrument”, select “C-Media inc. External MIDI (MPU-401)” item.

2

Installation of the Audio Excel PnP 310

2.1 The Audio Excel PnP 310 Jumper Setting Description

Table 2.1 The Audio Excel PnP 310 Jumper Setting Description

JPx	Function	Jumper Setting	
JP1	Output select		Power Amplifier
			Line-out
JP3	Microphone type	open	normal Microphone
		short	special Microphone

Attention : ***If your sound card doesn't have power amplifier built-in, there is no JP1 jumper to set.***

Table 2.2 Connector function

Connector	Function
J1	Connect Wave Table Upgrade Board (optional)
J2	Connect with joystick or MIDI cable
J3	Connect Panasonic CD-ROM Audio output
J4	Connect IDE/Sony CD-ROM Audio output
LINE	Connect with the audio output(line-out) from stereo
MIC	Connect with microphone(mono)
SPK	Output to speaker or audio-in of stereo

2.2 DOS and Windows 3.1 Applications Installation

Please make sure that your hard disk has 4MB free spaces at least. Insert the "DOS/Win3.1/NT" Diskette into drive A:(or B:).

1. Change to drive A(or B) at DOS prompt, type in ***INSTALL*** [Enter].
2. Type DOS utilities path that you want to install.
3. Type the path of Windows 3.1 when asking Windows path.
4. Program will expand file to path that you specify.
5. After expanding DOS utilities, program CMINIT.EXE will be executed and showing current value of all I/O. Please adjust I/O to avoiding conflict, if you were in non-PnP mode. Press ESC key to exit.
6. Mixer program CMMIX.COM will be executed too. You can adjust default volume to your favorite value. Press ESC key to exit.
7. Install program will continue execute testing program CMTEST.EXE to check output of sound card.
8. Program will launch Windows 3.1 to install device drivers and applications.
9. Please restart PC after installation completed.

P.S. :

1. After installation, if you want to change I/O of Windows device drivers, please execute file CMINIT.EXE to adjust item 'WSS I/O','WSS IRQ' and 'WSS DMA'.
2. If you didn't install Windows applications (only install DOS utilities), run 'WSETUP.EXE' in disk root directory to install Windows applications.

2.3 DOS Utilities Installation only

To install DOS utilities only , please follow steps that described above. Press ENTER key when asking Windows path for none.

2.4 Set DOS environment variables for Sound Blaster compatible

The Audio Excel PnP 310 is compatible with Sound Blaster, so you can execute programs which can run with it, but you need to set the DOS environment variables like below : C:\SET BLASTER = A2**x**0 I**y** D**z** T4

x = 2 or 4 (This is address number)
y = 5 or 7 or 9 or 10 (This is IRQ number)
z = 0 or 1 or 3 (This is DMA number)

3

Utilities Software

It is always a good idea to make backup copy of your original software. Make a backup copy of your "Audio Excel PnP 310 software disk" now and store your original diskettes in a safe place.

NOTE: In the following paragraphs, Utilities are assumed to be installed in default Drive:\Path directory, which is C:\CM8330.

3.1 CMINIT

The CMINIT.EXE can change the Audio Excel PnP 310's I/O address, DMA channel, IRQ channel, Game port and MPU-401 MIDI port without jumper setting.

In main menu, you can use arrow keys to select items that you want to change. The sub window will display the I/O you can select. If any PCI or PnP card use this I/O , item will gray to avoiding conflict and display the PnP card title that use it. In Windows 95, "DOS prompt" or "shut down to DOS" are still in Windows 95 protected mode, changing I/O by user are not expected. So program will display current value of all I/O, called "status" mode. At DOS prompt, type

CMINIT [Enter]

You can see all I/O settings in the main Menu.

WSS Base I/O Address..... Select WSS mode base I/O address
WSS IRQ Channel ..... Select WSS mode IRQ channel
WSS DMA Channel..... Select WSS mode DMA channel
Voice I/O Address ..... Select SB mode base I/O address
Voice IRQ Channel ..... Select SB mode IRQ channel
Voice DMA Channel..... Select SB mode DMA channel

Voice 16bit DMA Channel ..... Select SB mode 16-bit DMA transfer channel

MPU-401 I/O Address ..... Select MIDI base I/O address
MPU-401 IRQ Channel ..... Select MIDI IRQ channel
Game Port I/O Address ..... Display Game Port base I/O address
FM(OPL3) I/O Address ..... Display FM(OPL3) base I/O address

Using arrow key to move to the item that you want to change and press [ENTER] key to execute. To quit or save change, press [ESC] key.

Program will automatically update file "AUTOEXEC.BAT" if selecting "save setting & exit". Otherwise, it will remain unchanged. Once you save the change, a new I/O setting will be got ever since.

P.S.: The arguments after CMINIT in the file AUTOEXEC.BAT are updating by file CMINIT.EXE.

3.2 CMMIX

CMMIX.COM is a mixer control program. At DOS prompt, type

CMMIX [Enter]

You can adjust the volumes of all channels or change recording channel.etc.

Master ..... MASTER volume control
FM ..... FM music volume control
WAVE ..... WAVE volume control
LINE-IN ..... LINE-IN volume control
Ext. synth ..... wave-table output volume control
Analog CD-IN ..... Analog CD-Audio volume control
Digital CD-IN ..... Digital CD-Audio(SPDIFIN) control
MIC ..... Microphone volume control
3D SURROUND ..... Enable/Disable 3D surround sound
LOUDNESS ..... Enable/Disable output gain
SB Mixer emu. ..... Enable/Disable SB mixer emulation
Recording Setup ..... Recording gain and channel selection
Exit ..... Save setting and exit to DOS

When exit this program, it will automatically update AUTOEXEC.BAT file for next time reboot (power ON) initialization.

P.S.: We set default SB mixer emulation functions to disable. It fits to most applications and games. If there is any applications using SB mixer panning function to separate left and right sound channel, you can set this functions to enable.

3.3 CMTEST

CMTEST.EXE checks the Audio Excel PnP 310 I/O address, IRQ channel, DMA channel, and tests the Audio Excel PnP 310 hardware functionality including synthesized music, voice playback and voice recording. At DOS prompt, type

CMTEST [Enter]

CMTEST scans I/O address, IRQ channel and DMA channel jumper settings on the Audio Excel PnP 310.

After I/O settings are tested, you may proceed to choose to test synthesized music, output voice and recording functions. Speakers connected to the Audio Excel PnP 310 are necessary for all the tests. Microphone is necessary for test recording.

Synthesized music test generates music output with the Audio Excel PnP 310 on board synthesizer. Output voice test generates voice with the Audio Excel PnP 310 digitized output channel. To test recording, you need to speak to the microphone. Your speech will be reproduced on the digitized output channel.

If you can't hear sound during any of the above tests, check connections between the Audio Excel PnP 310 and speakers, microphone then run the test again.

If your Audio Excel PnP 310 passes these tests, it is OK for your applications. When CMTEST shows the I/O address, IRQ and DMA information, please add the follow setting to your AUTOEXEC.BAT file.

SET BLASTER=A220 I5 D1

Note: A# .....# is the I/O address
I#.....# is the IRQ number
D# .....# is the DAM channel

This setting in AUTOEXEC.BAT will be helpful to some software to recognize the Audio Excel PnP 310.

3.4 CMUTIL

CMUTIL.EXE is an integrated voice utility program to help you create and replay voice files. At DOS prompt, type ***CMUTIL*** [Enter]

Integrated environment of CMUTIL appears on screen.

3.5 CMORGAN

This program lets you play PC keyboard like an electronic organ. There are 128 tones can be changed by pressing F1. Press F2 can play MIDI file (*.MID).

3.6 CMPLAY

CMPLAY.EXE lets you play voice file at DOS prompt. Voice is played in a background process. You may specify optionally a foreground process running at the same time when voice is playing.

3.7 CMREC

CMREC.EXE lets you record voice into file at DOS prompt. Voice is recorded in a background process. You may specify optionally a foreground process running at the same time when voice is being recorded.

3.8 CMCDPLYR

CMCDPLYR.EXE lets you play CD-Audio at DOS prompt. At DOS prompt, type ***CMCDPLYR*** [Enter]

3.9 PLAYWAV

PLAYWAV.EXE lets you play wave file at DOS prompt. To run PLAYWAV, at DOS prompt, type in ***PLAYWAV filename*** [Enter]

example: PLAYWAV DEMO.WAV

4

Installation of Windows 95

ATTENTION:

1. We recommend that you have already installed Microsoft Windows 95 before installing Audio Excel PnP 310. And you didn‘t install any other sound card device drivers in your current system.
2. Please make sure your PC BIOS PnP AUTO CONFIG is set to ENABLE, if your PC BIOS supports PnP function.
3. If you got any problem with installing Windows 95, please contact your local Microsoft‘s agent.

4.1 Installing the Windows 95 driver

Steps of installing Windows 95 driver of Audio Excel PnP 310:

1. Insert the Audio Excel PnP 310 Windows 95 installation diskette into drive A:.
2. Turn on the computer, and enter into Microsoft Windows 95.
3. You will see a windows prompt like this:

   “New Hardware Found
   CMI8330 Audio Adapter
   Windows has found new hardware and is installing the software for it”

   , then the dialog box shown.
4. Select “Driver form disk provided by hardware manufacturer”, click “OK”.
5. When system requests for Audio Excel PnP 310‘s Windows 95 installation disk.Please make sure the path is point to the drive that installation disk is in, and click “OK”.

6. Now, system is installing PnP device drivers automatically. After a while, system finished installation. Then enter Windows 95 main screen. You will hear a wave playing from the system if you have installed speakers.

7. Now, you have already installed Audio Excel PnP 310 on Microsoft Windows 95 successfully.

If you want to install Windows applications of Audio Excel PnP 310, Please follow the following steps:

1. Click "start" key, Select "Run".
2. Please make sure your Audio Excel PnP 310's Windows 95 driver disk is in floppy A.
3. Please Key in the path name of Windows applications install program as "A:\WSETUP.EXE"
4. Click "OK" to start the procedure of installation, and follow questions to finish installation.
5. Shut down Windows 95 system and reboot your system, when all of application software have been installed.

4.2 Install DOS drivers under Windows 95 DOS

If you enter DOS and excuting applications or games by press "Alt-F5" or "F8" key before Windows 95 system booting. You need to install DOS drivers. Please run "INSTALL.EXE" program in root directory of "DOS/Win3.1/NT" driver disk(Refer user manual section 2.3). Please do not specify Windows path when program request. You need only DOS drivers.

If you just running applications and games in Windows 95 system or shut down to DOS, you don't have to install DOS drivers.

4.3 About Full Duplex :

4.3.1 How to test the Full-Duplex function of Audio Excel PnP 310 (PLAY and RECORD at same time) ?

1. Press "Start" key
2. Select "Programs" "Accessories" "Multimedia" and press "Media Player".
3. Please click item of "Device" and click "Sound".
4. Press the left key of your mouse.
5. Select "The Microsoft Sound", and press "Open".
6. Click item of "Edit" and "Options".

7. Please click “Auto Rewind” and “Auto Repeat” , then “OK”.
8. Press play key of “Media Player”.

At this moment , you can hear the sound from “The Microsoft Sound” .

4.3.2 Prepared for recording.

1. Click “Start” key
2. Moved the mouse cursor to “Programs”.
3. Then move the cursor to “CMI8330 Audio Rack”
4. Select item “Audio Rack” and click.
5. Now you can see the Audio Rack program shown on your screen.
6. Set recording channel to “Wave” from mixer program
7. Click the red spot on wave player to start recording.
8. Now you can see the recording function works fine here.

Note: If there is no problem when playing WAV in “Media Player” and recording WAV in “Audio Rack”, then your Full-Duplex sound system should work OK now.

4.4 Windows 95 Important Note

As we recommended in this manual before, you should install Win95 to your PC system before you installed Audio Excel PnP 310. If you do the installation VICE VERSA, then, the drivers of Audio Excel PnP 310 cannot be installed automatically and “Device Manager” in Win95 will detect Audio Excel PnP 310 as “Other devices”, an “?CMI8330 Audio Adapter” will also appear on the screen. If this happens, please follow the steps to remove the existing drivers in your system and re-install all the Audio Excel PnP 310 drivers again:

1. Press “Start”, move cursor to “Setting” then press “Control Panel”
2. Select “System”, then press “Device Manager” and find the “Other devices”.
3. Select “?CMI8330 Audio Adapter” and “Remove”. There are total 4 ‘?CMI8330 Audio Adapter”’s, so you should “Remove” them one by one.
4. Press “Refresh”, Win95 will automatically execute the installation of the sound card drivers. Please follow the previous chapters of this manual to complete the installation.

5

Installation of Windows NT 4.0

ATTENTION:

1. We recommend that you have already installed Windows NT 4.0 before installing Audio Excel PnP 310. And you didn‘t install any other sound card device drivers in your current system.
2. Please make sure your PC BIOS PnP AUTO CONFIG is set to ENABLE, if your PC BIOS supports PnP function.
3. If you got any problem with installing Windows NT 4.0, please contact your local Windows agent.

Please follow the following steps to install Audio Excel PnP 310 device drivers into Windows NT 4.0.

1. Click “Start” button, move highlight bar to “Setting”, select “Control Panel”.
2. Double click “Multimedia” icon.
3. Select “Devices” page and press “Add” button.
4. Select “Unlisted or Updated Driver” item in “List of Drivers”.
5. Specify path that NT drivers is in (ex. A:\NT).
6. Select “C-Media CM8330” item and press “OK” button.
7. Select proper value of I/O.
8. Press “OK” button.
9. Restart system when asking.
10. Now, you have already installed Audio Excel PnP 310 on Microsoft Windows NT 4.0 successfully.

If you want to use MPU-401 MIDI device, please follow the steps describe above. But in steps 4, select “MPU-401 MIDI compatible driver” item. Specify the path of Windows NT 4.0 CD-ROM directory \I386, system will add MPU-401 MIDI device for you.

6

Windows Applications(Audio Rack)

6.1 Introduction

Audio Rack lets you control over your PC's audio functions through a user interface as simple to use as a home stereo system.

Audio Rack consists of several major components:

Control Center: Controls the display of Audio Rack's components.

MIDI Player: Plays MIDI music files. Lets you create song playlists and play the song files.

Wave Player: Records and plays digital audio (wave) files. Lets you create wave file playlists and playback the wave files.

CD Player: Plays standard audio CDs. Allows you to create playlist collections of CD tracks (songs).

System Mixer: Sets the volume level of your audio inputs and outputs.

Showing or Hiding Audio Rack Components

To remove or add a component from display, click on the component's button on the Control Center's Button Bar or toggle it off.

6.2 System Mixer

System Mixer lets you control all audio output and input levels.

Volume Control: Clicking on this button allows you to use the output level controls.

Recording Control: Clicking on this button allows you to use the input level controls.

***Input and Output Level Sliders and Buttons*:** For each input or output signal, a control slider controls the loudness, a horizontal slider controls balance between the two speakers, and the mute button temporarily stops input or output without changing slider positions.

Control types and names vary. Some common types are listed below:

- **Vol**: The master control for all outputs. The strength of an output signal is determined by both the Vol slider and the slider for the individual output. To affect *all* outputs, move the Vol slider. To change the output of an *individual* output type, move *its* slider.
- **Line-in**: Controls the audio hardware's Line In or Line Out levels. Line In might be for an externally attached cassette player, e.g.
- **Mic**: Controls the microphone input level.
- **Wave**: Controls wave (voice) playback or record levels.
- **FM**: Controls the FM music play or record level.
- **Synth**: Controls the external MIDI synthesis(wave table) play or record level.
- **CD**: Controls the CD drive audio output level.
- **Dig-CD**: Turn on or off the CD drive digital audio output.

- **3D Snd**: Toggle the 3D surround sound effect.
- **Loud**: Toggle the output loudness.

***Mute Buttons*:** Toggle between muting and resuming the output volume. A button with a lit LED is resuming the output, while a LED not lit is muted. Several *output* signals can usually be enabled at once.

6.3 MIDI Player, Wave Player, and CD Player

CD Player (above, similar to Wave Player and MIDI Player)

Sel (or Trk) field: If you have multiple selections in your playlist, this shows the number of the current selection or CD track.

Current File or Track: The name of the current MIDI file, wave audio file, or CD track.

Total Length field: displays the total length of files or tracks in minutes and seconds.

Current Time field: displays the current time of files or tracks in minutes and seconds when playback or recording.

Please refer to help screen for more detail button functions description. (click on help "?" button on player)

7

Questions & Answers

Q1: Can we keep the PnP function of Audio Excel PnP 310 even on a Non-PnP motherboard?

A1: Yes, but you have to use Win 95 and install the drivers properly.

Q2: When Audio Excel PnP 310 and other NON-PnP interface cards are installed on a same motherboard, anything we need to do during the installation?

A2: In this case, please install the NON-PnP cards first and make sure that the cards work normally (no matter under DOS or Win 95), then install Audio Excel PnP 310. Thus, the motherboard can reserve the I/O resources for the NON-PnP cards first and afterwards makes the installation of PnP card easier.

If there is any conflict happen still, you have two way to go. One is to adjust NON-PnP device driver setting and jumper on the card. Another is to click "System" icon at "Control Panel" group, press "Device Manager" and find the "sound,video and game controllers" item. Double-click on it, there are interrogation mark shown in front of conflicted devices. Double-click on these devices, press "Resources" and clear "Use automatic settings", choose lastest item of "Setting base on:" and press "Change setting..." button then select a no conflict value and press OK button. Make sure all items of "resource type" are not conflicted. Reboot Windows 95 system, conflict will disappear.

Q3: Why some games auto-detect the sound card to WSS mode, but I/O can not fit to the current setting?

A3: Windows Sound System (WSS) supports registers for applications (game) to set IRQ and DMA channel. Auto-detect function of some games uses these registers to set IRQ and DMA channel by itself. Because our sound card supports Plug and Play functions, I/O resource must be allocated by PnP BIOS or Windows 95. Allocating I/O resource by applications will cause I/O conflict with other interface cards. Users should decide sound card's mode by themselves.

Q4: Why there are repeat sound playing while Win 3.1/95 starts?

A4: This is because some I/O(IRQ¡BDMA) conflicts between adapters. Please adjust I/O resources of all interface cards, especially non-PnP cards.

Q5: What is "Full-Duplex"?

A5: "Full-Duplex" can manage "Recording" and "Playback" (WAV) at the same time. This function makes the two-way dialogue under Internet IPHONE possible.

Q6: Does "Full Duplex" function of Audio Excel PnP 310 work in Windows NT/3.1?

A6: We're sorry that "Full Duplex" can only work in Win 95 at the moment.

Q7: Why the person on the other end of IPHONE cannot hear my voice?

A7: 1) Make sure you have set the "Recording Control" under "Mixer" of "Audio Rack" to "Mic". Then use the "Mixer" and "Wave Player" of Audio Rack to test whether MIC can record and playback normally. Finally use the MIC test function in IPHONE to assure the volume table of the MIC will re-act.

2) Please set the "recording device" and "playback device" under IPHONE to "WSS(534)".

3) Set the "record and playback" under Win 95 to WSS(534) too.

Q8: I've already setup "Full-Duplex" in IPHONE, but why the sound card still works like "Half-Duplex"?

A8: Please note that there must be Full Duplex's on both sides of IPHONE users then Full Duplex can work properly.

Q9: Why there are no sound output during play MPEG file by MPEG card?

A9: Maybe Line-out of MPEG card didn't connect to Line-in of sound card or Line-in volume be muted in mixer.

Q10: Why there are no sound on MIDI play in Windows?

A10: Perhaps you don't have wave-table synthesizer, but your MIDI device set to MPU-401.

Please check by following procedure:

1. Click "Start", "setting", "control panel"
2. Double click "Multimedia"
3. Select item "MIDI"
4. Check the informat of "Single instrument', in normal case, it has:

   "C-Media inc. External MIDI (MPU-401)"

   "OPL2/OPL3 FM Synthesis" (Default device for MIDI)
5. Make sure, you are setting to "OPL2/OPL3 FM Synthesis"

Q11: Why there are no sound or a little bit sound when using speakers that have no power amplifier?

A11: Please connect to speakers with power amplifier for more powerful sound.

Q12: How can we execute DOS Games in Win 95?

A12: You can execute DOS Games in Win 95 by three means:

1) DOS Prompt - Because this is under Win 95 protect mode, some S/W's cannot be executed 100%.
2) Shut down to DOS - Most of the DOS Games can be executed.
3) Press "ALT-F5" or "F8" when boot-up - 100% DOS Games can be executed.(Refer user manual section 4.2)