

Last minute Update to YAMAHA MegaWave Sound Cards. March.5th 1997.

We are pleased to announce the release of the new YAMAHA SA3 (719) chipset to take the place of the **MegaWave Gold** sound card. The SA3 chipset is pin-compatible with the existing SA2 (718) chipset used on Model # 2521 v1 – In other words it uses the same PCB (Printed Circuit Board) design, and layout as the previous SA2 model.

The new sound card to incorporate the YAMAHA SA3 (719) chipset is **Model # 2526 v2**. The added features are **Advanced 3D Sound** built into the SA3 chipset (rather than the *Binaura* 3D Sound Technology Used on Model # 2526 v1). This new Advanced 3D Sound feature adds software control to the 3D Sound. Upon installation the drivers will recognize the SA3 chipset and assign 3 control buttons to the Willowpond MediaRack utility software.



When the SA3 sound card & driver are installed, a button for **3D On/Off** will appear on the mixer section of the Willowpond MediaRack utility. Also controls & sliders for **Bass** and **Treble** will appear.

The software drivers for the SA3 chipset are identical to those used by the SA2 chipset. Therefore installing the drivers from the YAMAHA SA2 page on the MMCD is easy for both models. As stated previously, the drivers will automatically detect the chipset type and assign 3D sound controls automatically to the Willowpond or Y-STATION MediaRack utilities, if necessary.

Note: Similar controls for 3D, Bass & Treble will also appear on the YAMAHA Y-STATION Utility included with these sound cards

MegaWave & MegaWave Gold YAMAHA 16-BIT 3D Sound Card

Before installing this MegaWave or MegaWave Gold Sound Card, please read this manual carefully and retain it for future reference.

NOTE : LOADING SOFTWARE FROM YOUR CD-ROM DRIVE..

You will notice in the instructions concerning installation of software drivers contained in this manual, references to the CD-ROM drive letter 'd' (i.e. **d:\eng\sa2718\win95**). If this drive letter is not correct according to your system configuration, then please change as necessary.

Notes :

1 - **MegaWave** is a software wavetable sound card

2 - **MegaWave Gold** is a hardware & software wavetable sound card

Trademark Acknowledgments:

- OPL is a trademark of YAMAHA Corporation.
- IBM is a trademark of International Business Machines Corporation.
- Sound Blaster PRO and Sound Blaster are trademarks of Creative Lab Inc.
- MS-DOS and WINDOWS are trademarks of Microsoft Corporation.

1. Introduction

MegaWave & MegaWave Gold are 16-bit stereo sound cards based on the YAMAHA YMF718-S (SA2) integrated digital sound controller chip. This OPL series sound card is compatible with Sound Blaster PRO and provides an integrated audio solution for business audio, education/entertainment sound and multimedia applications.

They will let you run thousands of Sound Blaster and Sound Blaster PRO compatible games and applications, including a rapidly growing number of Windows business applications that are compatible with the Windows Sound System.

The **MegaWave & MegaWave Gold** sound cards both include hardware 3D surround sound effect to any audio signal, whether it is from an audio CD, MIDI or Wave file. Both models offer support for Wavetable synthesis with **MegaWave** including software wavetable support, and **MegaWave Gold** sound card includes software & hardware OPL4-ML wavetable on-board providing first class wavetable sounds.

Both cards fully support all PC popular sound standards, and have multiple input and output ports for the recording and playback of stereo sound.

1.1 Sound card features:

- Built-in 16-bit Sigma-Delta Stereo CODEC
- Programmable sample rate from 5.5kHz to 48kHz for recording / playback
- Dual DMA with FIFO for Full Duplex capability
- Supports IMA ADPCM, A-law and μ -law compress/decompression
- FM Synthesis is able to generate up to 20 voices simultaneously
- Software Wavetable synthesis is able to generate up to 32 voices simultaneously
- Hardware Wavetable synthesis is able to generate up to 24 voices simultaneously (**MegaWave Gold** sound card only)
- MPU-401 compatible MIDI interface
- Bundled with Yamaha Software Wavetable Driver - OPL Soft Synth
- Built-in 6 channel stereo mixer
- Supports 5 channel analog input
- Built-in 3D surround sound effect
- Software volume control for recording and playback
- Built-in 2 watts per channel stereo power amplifier
- Supports Plug & Play ISA 1.0a compatibility
- Supports advanced power management

1.2 What is in your package?

You should have the following items in your package:

- **MegaWave or MegaWave Gold** sound card
- *Multimedia CD-Rom (MMCD)*
- *Sound Card installation & Troubleshooting manual*

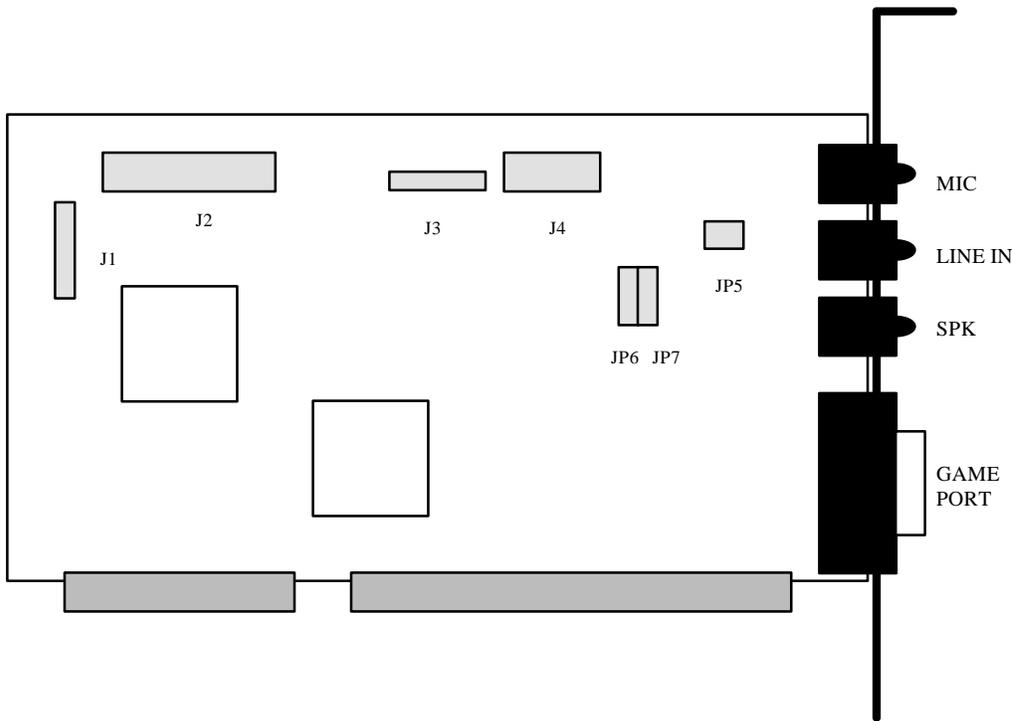
1.3 System Requirements

The **MegaWave or MegaWave Gold** sound card is manufactured for **IBM PC** compatible components, software and related computer components :

- IBM-compatible computer models and compatibles with PnP BIOS
- At least 2MB RAM (4MB RAM for Windows 3.1 / 8MB for Windows 95 Applications)
- VGA or SVGA graphics adapter and monitor
- 2MB free on hard disk for installing all *OPL3-WAVE / OPL4-WAVE* software
- MS-DOS version 6.0 or later
- Windows 3.1 for games and applications in Windows
- External speakers, microphone and headphones (optional)

This is the NEW layout for Model 2521/6 V4 - You can tell the difference by the number of connectors (Version 4 has 3, while the previous Version 3 has 4 connectors). Please first identify which model you have purchased for the necessary jumper settings & locations - The software drivers are identicle for both cards.

Model 2521/6 - V4 - Jumpers & Connectors Locations

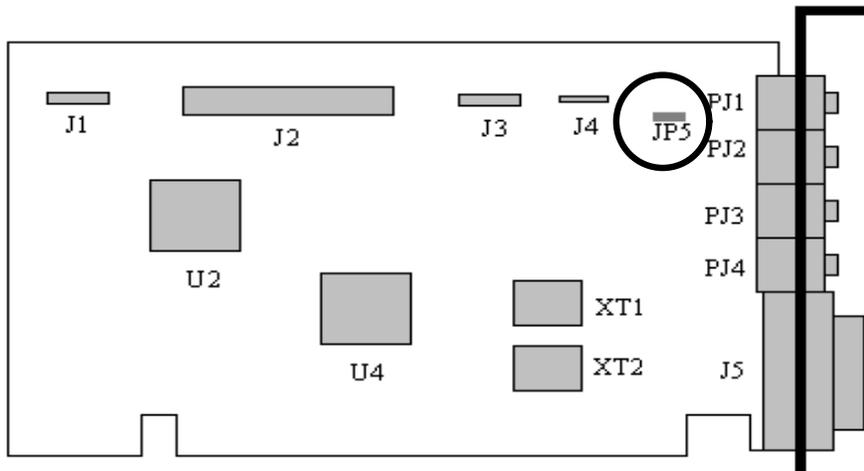


Jumpers description

JP5	(Default) Open, for mainstream mic use Close, for alternate mic use
JP6 / JP7	(Default) 2-3, for speaker out 1-2, for line out
J1	PC Speaker-In connector
J2	Wavetable Upgrade connector
J3	CD Analog Input 1 connector
J4	CD Analog Input 2 connector

NOTE - JP5:- This connector has been implemented so that this sound card will be compatible with both old and new styles of computer microphone. The default setting is usually correct for today's mainstream microphones, however if you experience trouble then try changing this jumpers settings.

Installation for OPL3-SA2 / OPL4-wave



Layout of OPL3-WAVE / OPL4-WAVE Sound Card

Jumpers and Connectors Description

J1	PC Speaker IN Connector
J2	Wavetable Connector
J3	CD Analog Input 1 Connector
J4	CD Analog Input 2 Connector
J5	Game Port Connector
*JP5	Jumper for MIC compatibility
PJ1	MIC IN Connector
PJ2	LINE IN Connector
PJ3	LINE OUT Connector
PJ4	SPEAKER OUT Connector

JP5 Jumper for MIC compatibility

To fit the requirements of various types of microphone in the market, we have added in a jumper setting at location 'JP5' to make it more user-friendly for end-user. The default jumper is '**OPEN**' which is good for the most commonly used microphone in the market. If this default setting doesn't work on your microphone, please change the jumper setting to '**CLOSE**'. This is illustrated in the below table.

Normal MIC	Open (default)
Non-Standard MIC	Close

2.2 Software Driver Installation

2.2.1 DOS & Windows 3.1 Driver Installation

The Sound Controller installation program (**INSTALL.EXE**) lets you configure the **IRQ** line (Interrupt Request), **DMA** channel, and **I/O** port address of the **MegaWave or MegaWave Gold** Sound card to ensure that both Sound Blaster Pro and Windows Sound System settings are compatible with your system configuration. **INSTALL.EXE** also lets you set the volume, enable the MPU-401 and game port interface.

After you have finished configuring the controller card, **INSTALL.EXE** will install the drivers for both **DOS** and Windows 3.1 (if you have Windows 3.1).

Along with the relevant Drivers, **YAMAHA STATION** and other applications are installed automatically.

Note: In a system that does not support PnP, please make selections that will not conflict with your system settings. Not doing so could make your system lock-up. If this happens, reboot your computer, run **INSTALL.EXE** again and select settings that will not conflict.

Installation Steps:

1. Insert the MMCD CD-ROM into your CD-ROM drive. Run the MMCD program and go to the **MegaWave / MegaWave Gold YAMAHA Sound Card** page. From this page click on the **'Install'** button for **DOS & Windows 3.1 Driver**.

Note : If the software drivers are updated there may be occasions where you receive diskettes as well as the MMCD. In this case please use the diskettes for the latest driver version. Put the diskette in to your diskette drive and type **A:\install** in the Windows RUN MENU or MS.DOS prompt.

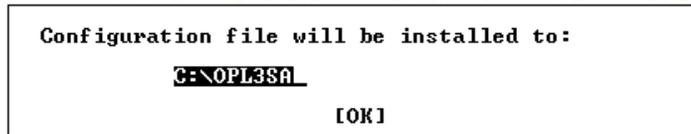
2. First the screen will prompt this program makes the temporary directory named **"OPL3TEMP"** and whether or not start making the directory and copying the files.
3. Type **" Y "** start copying files to **C:\OPL3TEMP**.
4. The following dialog box will appear when finished copying files.

```
YAMAHA OPL3-SAx Driver Installation
Copyright(c) 1996 YAMAHA Corporation All Rights Reserved

Do you want to install the OPL3-SAx Board ?

      [Yes]                [No]
```

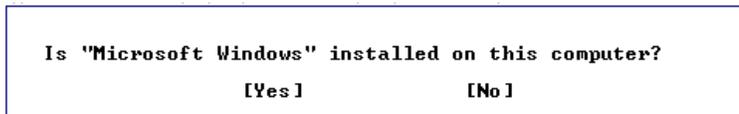
5. Select and click **Yes**. (If you're not using a mouse, press the **Enter** key for **Yes**, or the **Esc** key to **Cancel**)



6. Specify the installation directory for the **OPL3SA2** configuration file or accept the default, then click **OK**, the files are copied to the hard disk and the following dialog box appears.



7. Click the **OK** to continue, new "**AUTOEXEC.BAT**" was install on drive **C**, you original "**AUTOEXEC.BAT**" file was saved as "**AUTOEXEC.BAK**", then the following dialog box appear, asking whether or not you have **Windows** installed on your computer.



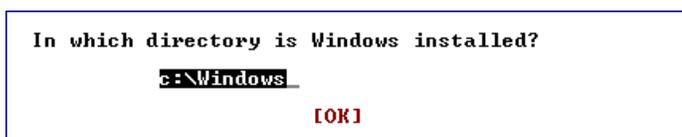
8. Select and click **Yes**, the following dialog box will ask whether or not you want to install the **OPL3-WAVE** Driver.



9. Click **Yes** to install and the next dialog box will show below:



10. Specify the installation directory for the Applications or accept the default, then click **OK**, the following dialog box appears, asking where Windows is installed.



11. Click **OK** if Windows is installed in the directory **C:\Windows**, which is the default directory, or specify a different directory.
12. After the Windows settings have been changed, the following dialog box appears, asking whether you want to replace the MIDI Mapper.

Do you want to replace the MIDI mapper?
If you select YES,
your original MIDI mapper will be saved as "midimap.opl".

[Yes] [No]

13. Select **Yes** to replace the current **MIDI Mapper** already exists and you replace it with the **OPL3-WAVE MIDI Mapper**, the original is saved as "**midimap.opl**".
14. Then the '**setup window**' appears on the screen, you can set the **I/O** address, interrupt and **DMA** for the sound card, make sure those settings do not have any conflicts with other devices inside your system, then click **OK**.
15. The screen asks whether or not you want to open this '**setup window**' next time, you type "**Y**" for yes or type "**N**" to cancel.
16. Then system informs you that the installation is completed and the original "**SYSTEM.INI**" file was saved as "**SYSTEM.OPL**".

Driver installation is complete.
Your original "system.ini" file was saved as "system.opl".

[OK]

17. Click **OK**, system asks whether or not you want delete directory "**C:\Opl3temp**" and all its subdirectories.
18. Type "**Y**" then **Enter**, system returns to **DOS** prompt. Restart your computer and launch Windows, the application (**YAMAHA STATION**) is expanded and the icon (**OPL SoftSynth**) is added in **Control Panel** automatically.

Notes:

- i. The **OPL3-WAVE / OPL4-WAVE** sound card must be inserted in computer for successful driver installation. If you have trouble running this installation software from the MMCD then exit to the DOS prompt and try again.
- ii. When booting up the system, the **OPL3-WAVE** driver will prompt you "**CM is not present**", this is due to the driver is looking for the Plug and Play Manager but the driver can still work without the Plug and Play Manager..

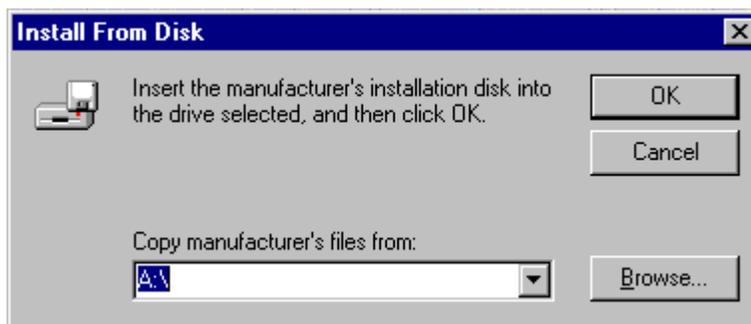
2.22 Windows 95 Driver Installation

Note: Install the sound card into the motherboard only after Windows 95 system has already installed into your HDD correctly.

1. Install the sound card on the motherboard, and power on the system.
2. During the Windows 95 boot procedure, new hardware will be detected as shown below:



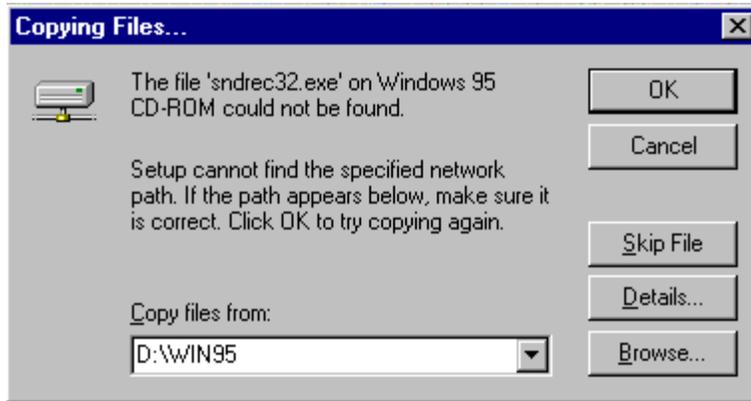
3. Select the “**Driver from disk provided by hardware manufacture**” item, click the “**OK**” button, Windows 95 will then prompt a “**Install From Disk**” dialog box:



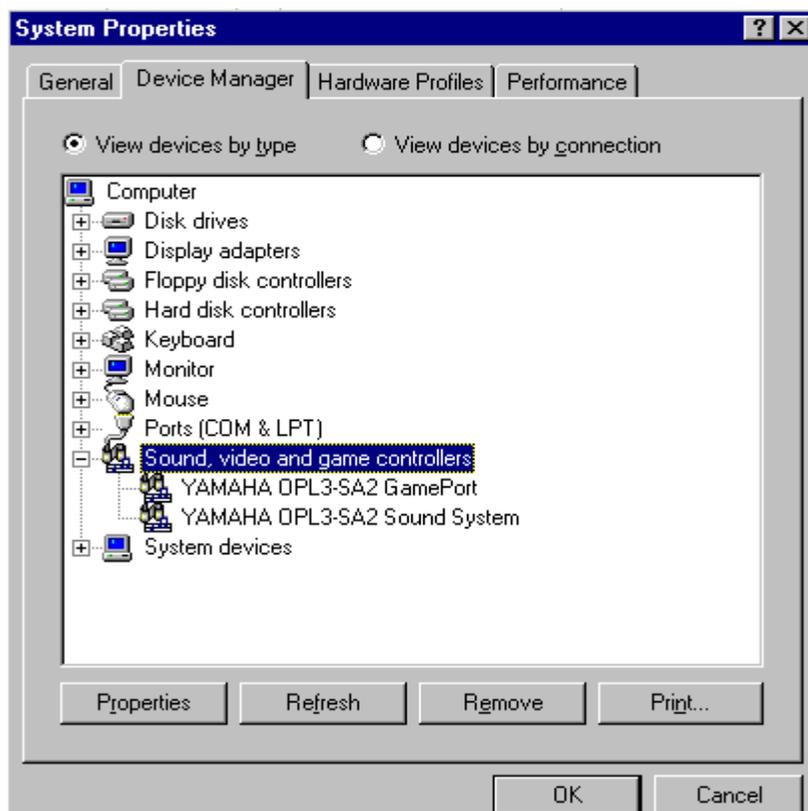
4. Insert the MMCD in to your CD-ROM drive and type **d:\eng\sa2718\win95** into the command line and click on the “**OK**” button.

Note : If the software drivers are updated there may be occasions where you receive diskettes as well as the MMCD. In this case please use the diskettes for the latest driver version. Put the diskette in to your diskette drive and type **A:\win95** in the command line under “**Copy manufacturer’s files from :**”

- Continually, if the system requires copying corresponding files from Windows'95 CD-ROM, insert Windows 95 CD into CD-ROM, select the specified path and click the "OK" button.



- When it's finished copying files, Windows 95 boots normally with the relevant OPL3 Windows 95 drivers. To make sure that the OPL3 Drivers have been installed correctly, open the system dialog box in the control panel shown below:



2.23 Adding volume control in Windows 95

Having installed the OPL3 Windows 95 drivers, the volume control is still not present, please follow the steps below to add the volume control back.

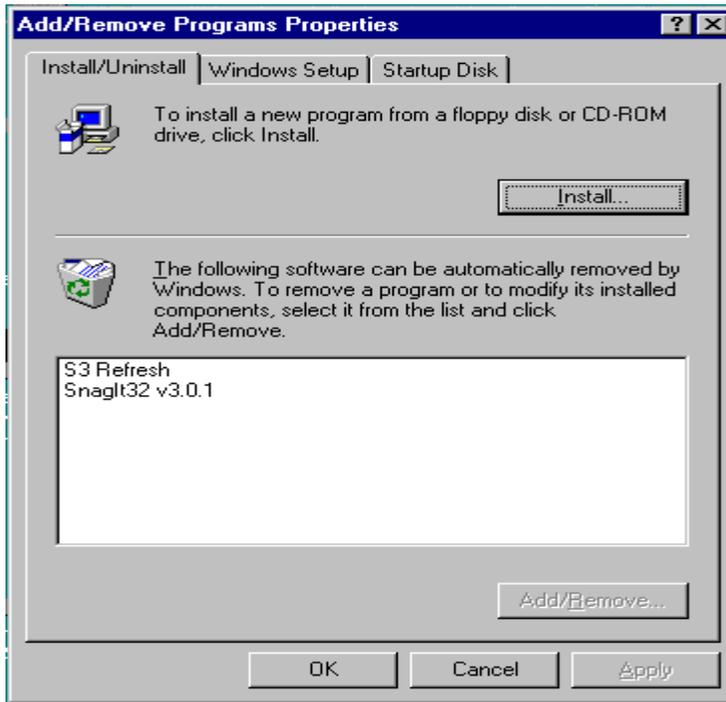
1: Select the “**Control Panel**” from the “**Settings**” from the Windows 95 taskbar.



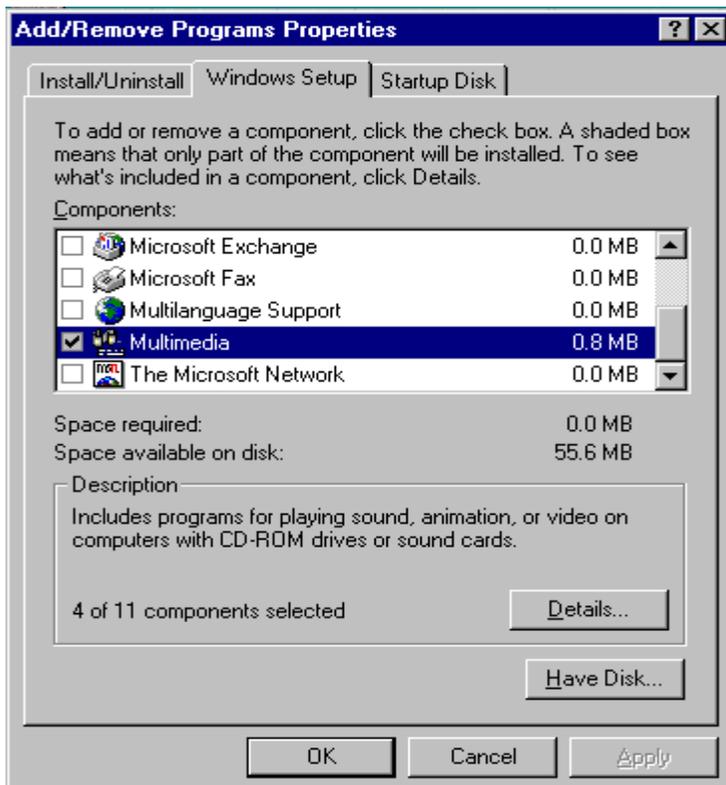
2: Double-click the “**Add/Remove Programs**” icon.



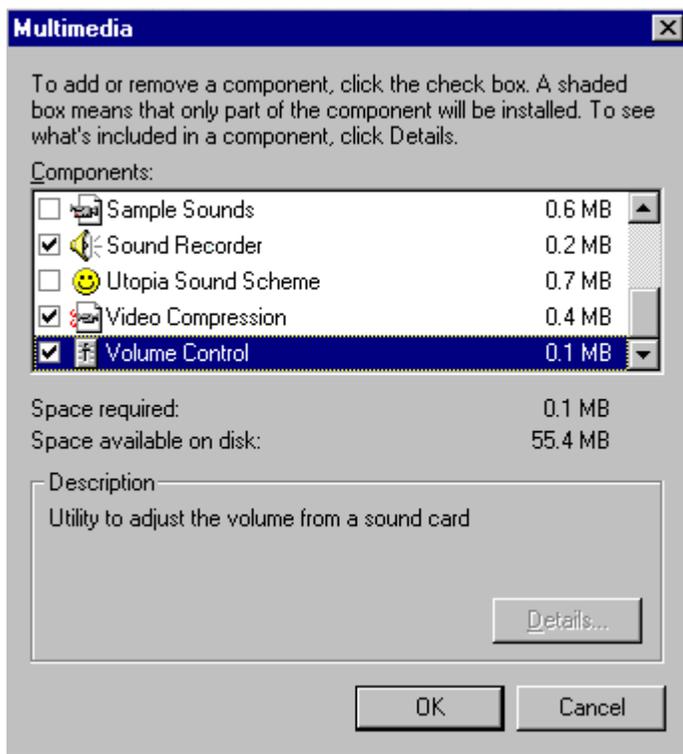
3: Click the “**Windows Setup**” tab.



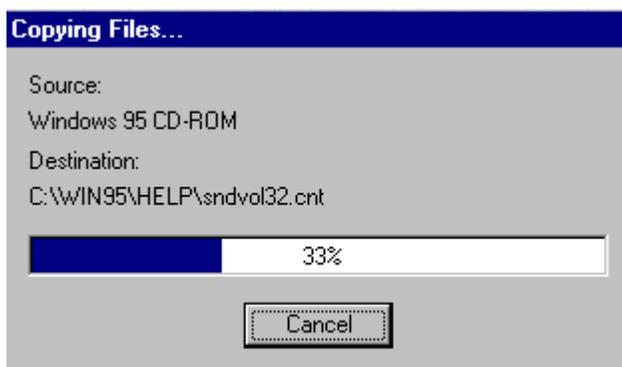
4: Click on the “**Multimedia**” selection.



5: Select the check box of the “**Volume Control**”.



1. Insert the Windows 95 installation diskette or CD-ROM as required.

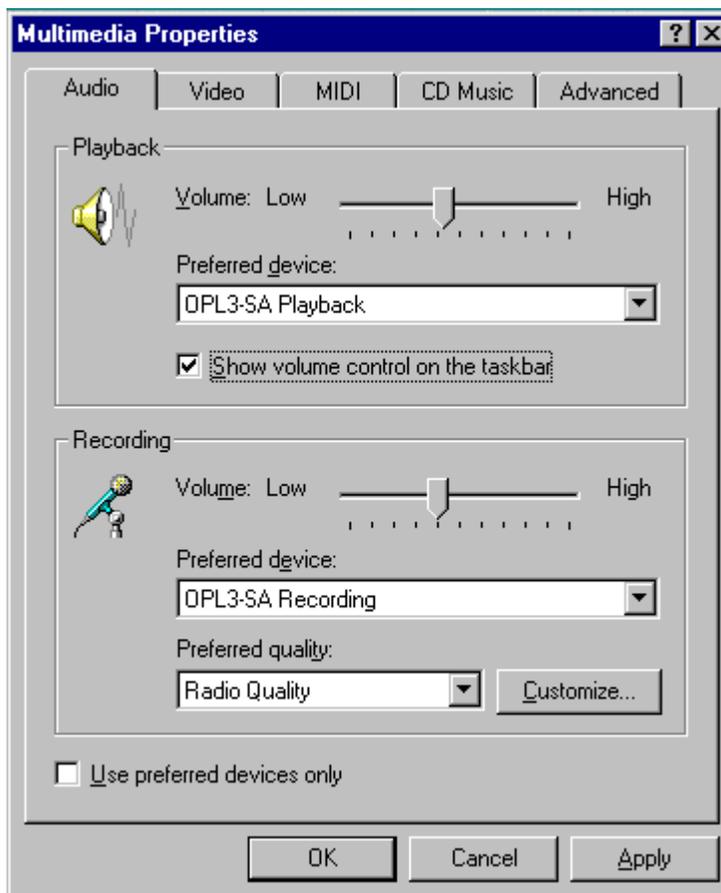


2. Click the “**Apply**” and then the “**OK**” button.

3. Click “**Multimedia**” icon within the “**Control Panel**” program group icon.



4. Click the check box of “**Show volume control on the taskbar**”.



Click the “**Apply**” and then the “**OK**” button

2.24 Windows NT 3.5 Driver Installation

1. After entering **WINNT** (Version 3.51). Double click on the “**Main**” . “**Control Panel**” . “**Drivers**” icons.
2. Click the “**Add...**” button
3. Select the “**Unlisted or Updated Driver**” item, and click the “**OK**” button.
4. Insert the MMCD in to your CD-ROM drive and then type **d:\eng\sa2718\winnt35** Then click the “**OK**” button.
5. Click the “**OK**” button again.
6. Under the “**ESS Base I/O Address**” dialog box, click the “**continue**” button.
7. After that, you can modify the setting to what you want under the “**ESS1868 Configuration**” dialog box. Click the “**OK**” button when you finish the modification.
8. For the new driver to take effect, you should click the “**Restart Now**” button.

2.25 Windows NT 4.0 Driver Installation

1. Double click **My Computer**
2. Double click **Control Panel**
3. Double click **Multimedia**
4. Click **Devices**
5. Click **Add**
6. Select **Unlisted or Updated Drivers** , then click **OK**
7. Insert the MMCD in to your CD-ROM drive and type in the path into the command line **d:\eng\SA2718\winnt4**
8. Follow the instructions of the drivers (select I/O, IRQ, DMA etc)

2.26 Playing Wavetable sounds using the Willowpond Media Rack Sound Utility

Both of the **MegaWave & MegaWave Gold** sound cards are supplied with some sort of wavetable sound support. The following section tells you how to select these different types of wavetable support within the **Media Rack** of our bundled **Willow Pond Utility Software's** also included on this MMCD.

In **Section 2.27** we will then go on further to understand how to get the most out of FM / Software Wavetable & Hardware Wavetable sound synthesis.

It is also suggested that you refer to the document called “ **midi.pdf**” included on this MMCD (located in the “**MMCD Library Section**”). This will further explain MIDI and different types of synthesis, together with actual recordings of the same MIDI song played through various types of synthesis used on these **MegaWave & MegaWave Gold** sound cards.

And now on to the basics. Here is a table of all types of supported sound synthesis within the Media Rack and whether or not your **MegaWave or MegaWave Gold** sound card supports that particular synthesis type...

Media Rack Name	Synthesis Type	MegaWave	MegaWave Gold
MIDI Mapper	Various (See section below)	. Yes	. Yes
OPL3-SA FM MIDI	FM (Frequency Modulation)	. Yes	. Yes
OPL3-SA MPU MIDI OUT	Hardware Wavetable (*Upgrade possible)	X No	. Yes
OPL3-SA Soft Wave Table MIDI OUT	Software Wavetable	. Yes	. Yes

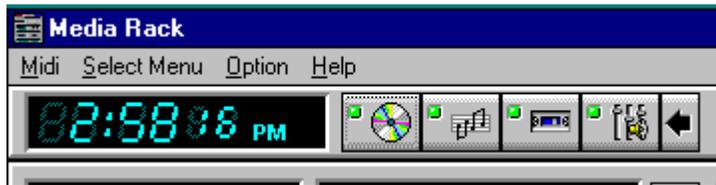
Note : Although the factory default version of the **MegaWave** sound card does not support hardware wavetable, this version does include an upgrade connector which will support hardware wavetable daughterboards (such as **Model # 2030 / 202A** included on this MMCD). With these upgrades the specifications will be the same as the **MegaWave Gold**.

How to choose each synthesis type for playback ?

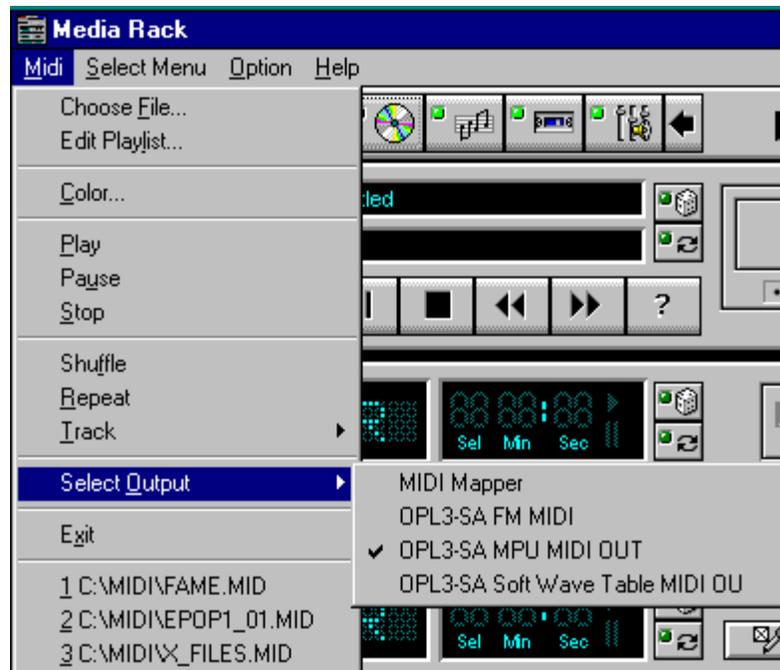
- 1: First of all, you should have installed the Willowpond Utility included on this MMCD. From this run the **Media Rack** application program.
- 2: From the toolbar menu of **Media Rack**, select the “**MIDI Player**” from the “**Select Menu**” pull-down menu.



- 3: The first column of the toolbar will change to “**Midi.**”



- 4: From the pull-down menu “**Midi**”, select the option of “**Select Output**”. If you are using the **MegaWave Gold** sound card you can select the option of “**OPL3-SA MPU MIDI OUT**” for hardware wavetable synthesis. Alternatively, you can choose any of the other choices for both **MegaWave & MegaWave Gold** sound card models.



- 5: You can play your midi song with Wavetable sound quality now.

2.27 How to get the most out of FM & Wavetable synthesis

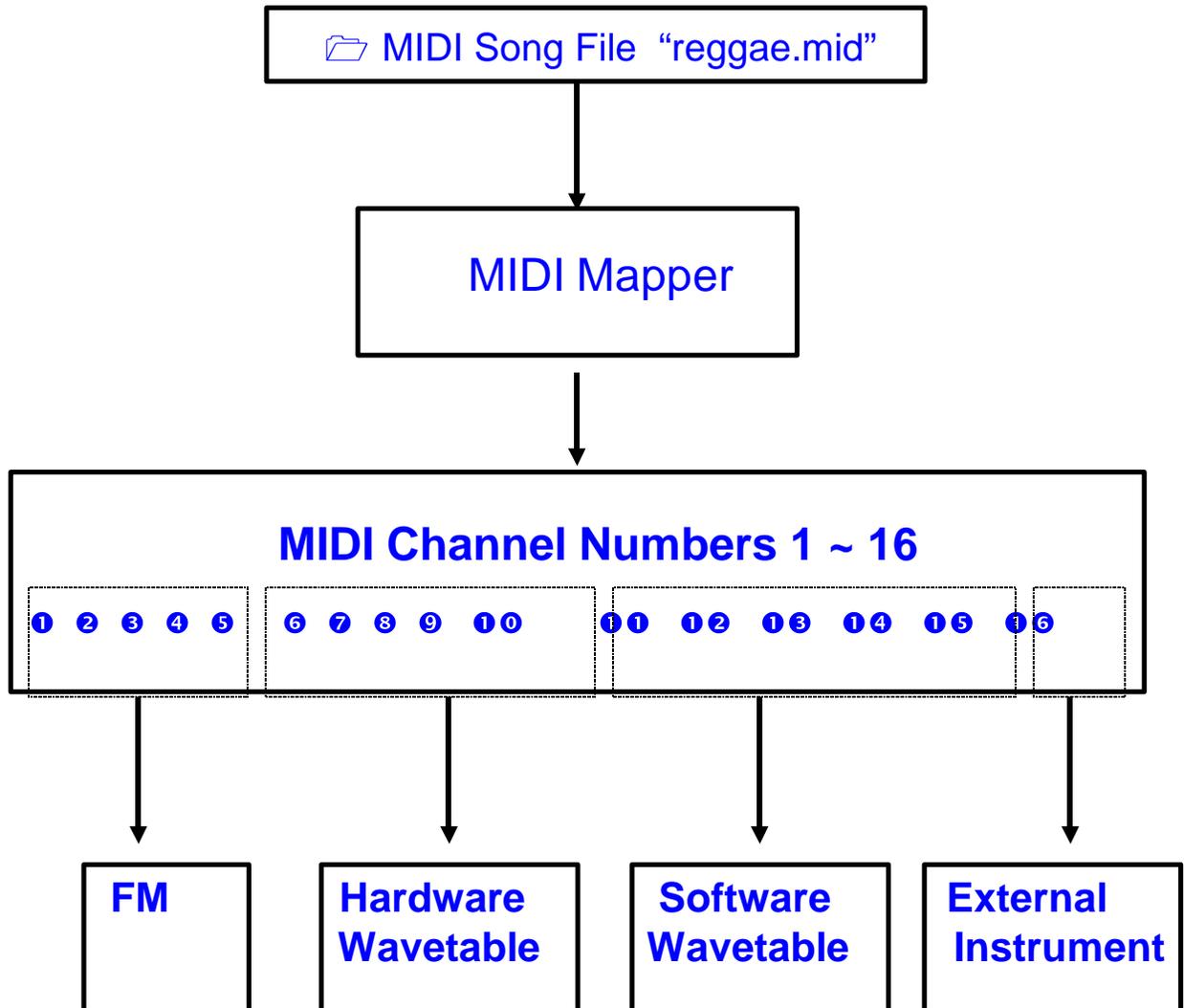
If you have had a chance to read the “**midi.pdf**” file included on this MMCD then you will be familiar with **FM & Wavetable** synthesis. You will understand that both types of synthesis are very different in their method of producing sounds, and as such both should be used to their best advantage in creating music for your PC. By reading the “**midi.pdf**” document you will also understand more about MIDI, MIDI song files, MIDI channels and MIDI instruments. One other area which needs to be covered is “**the amount of voices an instrument or sound card can produce simultaneously ?**” Typically, sound cards are capable of producing between 16 ~ 32 voices simultaneously, however your *MegaWave & MegaWave Gold* sound cards can utilize the FM, Software Wavetable and Hardware Wavetable synthesis simultaneously to produce between **52 ~ 76 voices**. This is achieved through a unique combination of the sound card design, YAMAHA Software Drivers and the Microsoft Windows MIDI Mapper / MIDI Configuration applications.

In **Section 2.4** you have learned how to ‘direct’ your MIDI song file through a particular type of synthesis (FM, Hardware or Software Wavetable), using the Willowpond Media Rack application. In the same way you can direct your MIDI song file to the “**MIDI Mapper**”. The MIDI Mapper can be seen as another routing method which lets you become more creative in your ‘routing method’ by allowing you to direct **each individual MIDI channel** (16 in all) through 4 different sound sources **FM - Hardware Wavetable - Software Wavetable - External MIDI Instrument**. This yields 2 major advantages

1. It increases the amount of voices that can be achieved, by taking advantage of the 20 FM voices / 24 Hardware Wavetable voices & 32 Software Wavetable voices - rather than directing your MIDI song file through just one of these synthesis types.
2. It allows you to become more creative in your musical compositions by routing a particular MIDI channel, track & instrument through to a synthesis type which best suits the required sound (for example ~ FM synthesis tends to have a synthetic & grainy edge to it's sound which is very well suited to either sound effects or electronic synthesiser type instruments, whereas FM is weak on true drums sounds. So for this you would route the drum channel

Note: Drum sounds are defaulted & should always be set to MIDI channel Number 10

Here is a layout diagram of how the MIDI Mapper works....



In this example (using **MegaWave Gold**) we can route specific MIDI channels through the 3 types of synthesis on our sound card, and then connect an external MIDI instrument to the MIDI/Game port and have this controlling channel 16 to add a melody line or to play over the top of the MIDI song file.

Tip : MIDI Channels can be thought of as 'tracks' of recording similar to a multitrack tape recorder used in music studios.

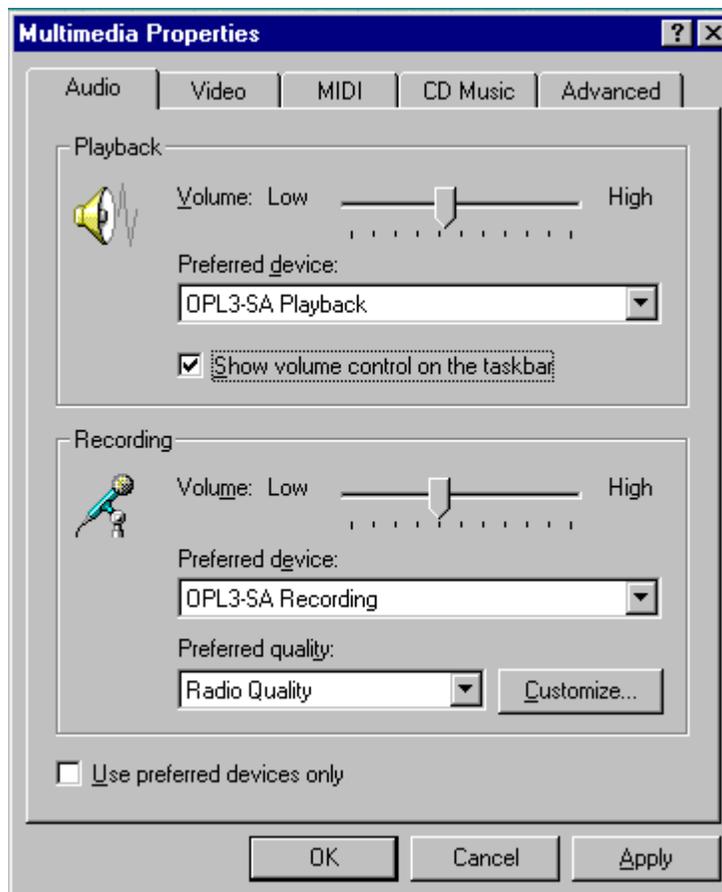
Question ? – How do I set up the MIDI Mapper ?

Here we will study the setup based on the Microsoft Windows 95 operating system...

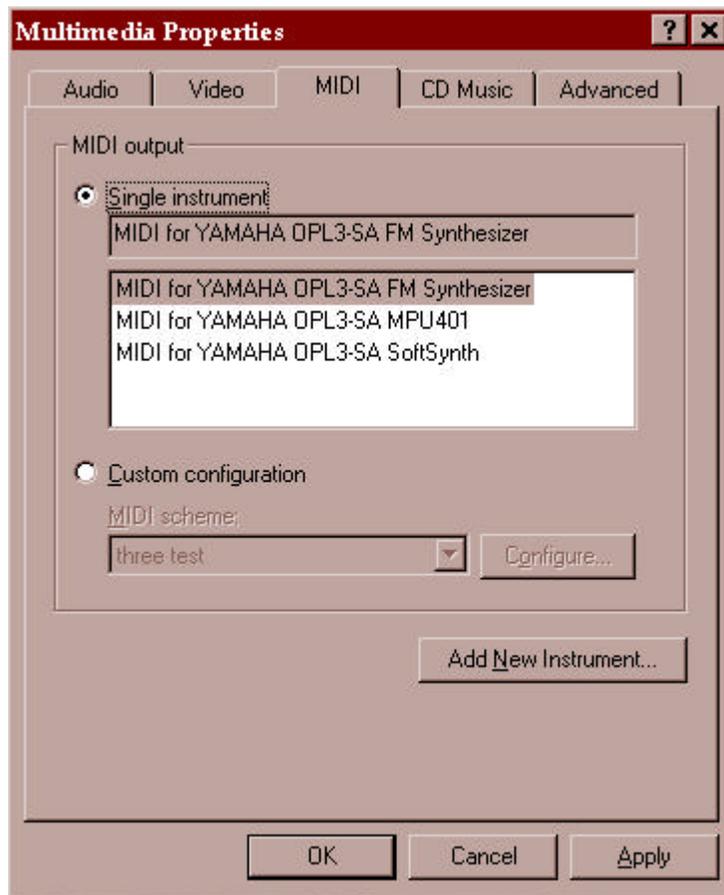
1. Open the **Control Panel** and then double click on **Multimedia**



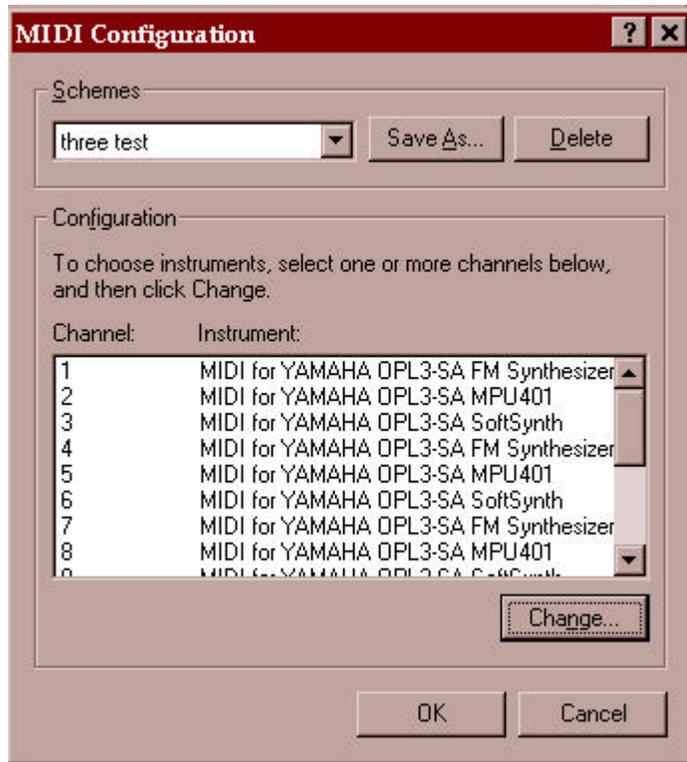
2. You will then see the following screen. Click on **MIDI**



3. This will take you to the MIDI screen as follows. Here you have 2 options for the MIDI output. First the **"Single instrument"** choice is similar to the choice in the Willowpond Media Rack where you can route the MIDI information/song to a particular MIDI instrument or synthesis (FM etc.). Your second choice is for **"Custom configuration"**. This is the MIDI Mapper application so click on this.



- Once you have clicked on the Custom Configuration the MIDI Configuration screen will appear as follows.



Here you can individually route each of the 16 MIDI Channel through to a specific instrument and then save this configuration under any file name (we have called this configuration 'three test' - routing the MIDI channels through to 3 different sound synthesis). You can save as many configurations as you like. To change the instrument type for that particular MIDI channel click on the channel number and then "**Change**" to select the particular instrument. If you want to add an external instrument then go back to the screen previous and choose "**Add New Instrument**"

Try experimenting with different sound synthesis types for different instruments to get the desired results.

3. OPL SoftSynth Control Panel

This section explains about the bundled Yamaha Software Wavetable. It allows you to experience the entry-level wavetable sound quality and performance. In future, if your applications require enriched wavetable sound quality, you are recommended to purchase either our Yamaha Wavetable daughterboard or Yamaha OPL4-WAVE sound card to upgrade your system.

The Soft Synthesizer supports **GM** System Level 1 **MIDI** data. Its volume is adjusted by the Wave volume control. The **OPL** SoftSynth Control Panel shown below is used to setup the Soft Synthesizer.



3.1 Quality of Software Wavetable Sounds

These four options determine the sound quality (i.e., sampling rate) and the number of voices that the SoftSynth can produce simultaneously. Select a mode appropriate for the **CPU** performance of your computer. If you choose a high quality mode and your computer does not have adequate processing performance, the SoftSynth may not produce sound fluently. In this case, select a lower quality mode.

Mode	Sampling Rate (kHz)	Max Voices
Normal	11.025	16
Good	22.050	16
Very Good	22.050	24
Excellent	22.050	32

3.2 Reverb Effect

If you choose **ON**, you can add reverb (a type of natural echo associated with concert halls or other buildings) to the sound of the SoftSynth.

3.3 Filter Effect

With the filter **ON** the SoftSynth sound is more fluent. This, however, requires **additional CPU resources**.

3.4 MPU401 OUT

These settings allow you to select an External **MIDI** instrument or the SoftSynth for use with **DOS**-based games that are played on Window box. The **MS-DOS** Prompt item in the Main Program Group to open an **MS-DOS** Window. Select General **MIDI** in the game settings to use this function.

3.5 Full Duplex

It is possible to record a new Wave file while playing an existing Wave file , also you can play Wave data and SoftSynth **MIDI** simultaneously.

YAMAHA Station Software

Introduction

The Yamaha Audio Rack software consists of CD, MIDI, and WAVE players. The WAVE component can record and playback WAV format files. There are six components: Power Control, CD, MIDI, WAVE, Multi, and Mixer. They can be arranged in any order, and it is not necessary for all components to be open all the time. The green LED blinks while a component plays. You can play WAVE and MIDI (.WAV and .MID) files simply by dragging and dropping them from the File Manager.

• Power Control Component

This component manages and launches the other components.



• WAVE Component

This component plays and records WAVE format files. The recording source can be CD(AUX), MIC, LINE, OR LOOP. LOOP is the internal circuit of the OPL3-SA2 (i.e. MIDI play source). The window display shows the file name, format, and time.



• MIDI Component

This component plays Standard MIDI Files (SMF). The window display shows the file name, tempo, and time.



- **CD Component**

This component plays audio CDs. The window display shows the track, title, song name, and time.



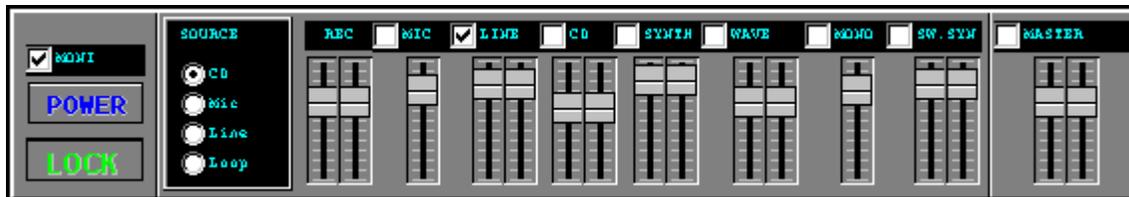
- **MULTI Component**

This component controls simultaneous playback of the CD, MIDI, and WAVE components.



- **MIXER Component**

This component controls playback and recording of your sound card.



From left to right the buttons are:

Management buttons

MONI When this box is checked, you can monitor the sound at the external LINE, CD, or MIC input while recording.

POWER Power ON/OFF

LOCK The left and right channel faders are locked together.

SOURCE Select the recording source (the MONI function is not available when Loop is selected).

Recording faders

REC CD, Mic, Line, or Loop recording level. Loop is the internal circuit of the OPL3-SA2 (i.e. MIDI play source).

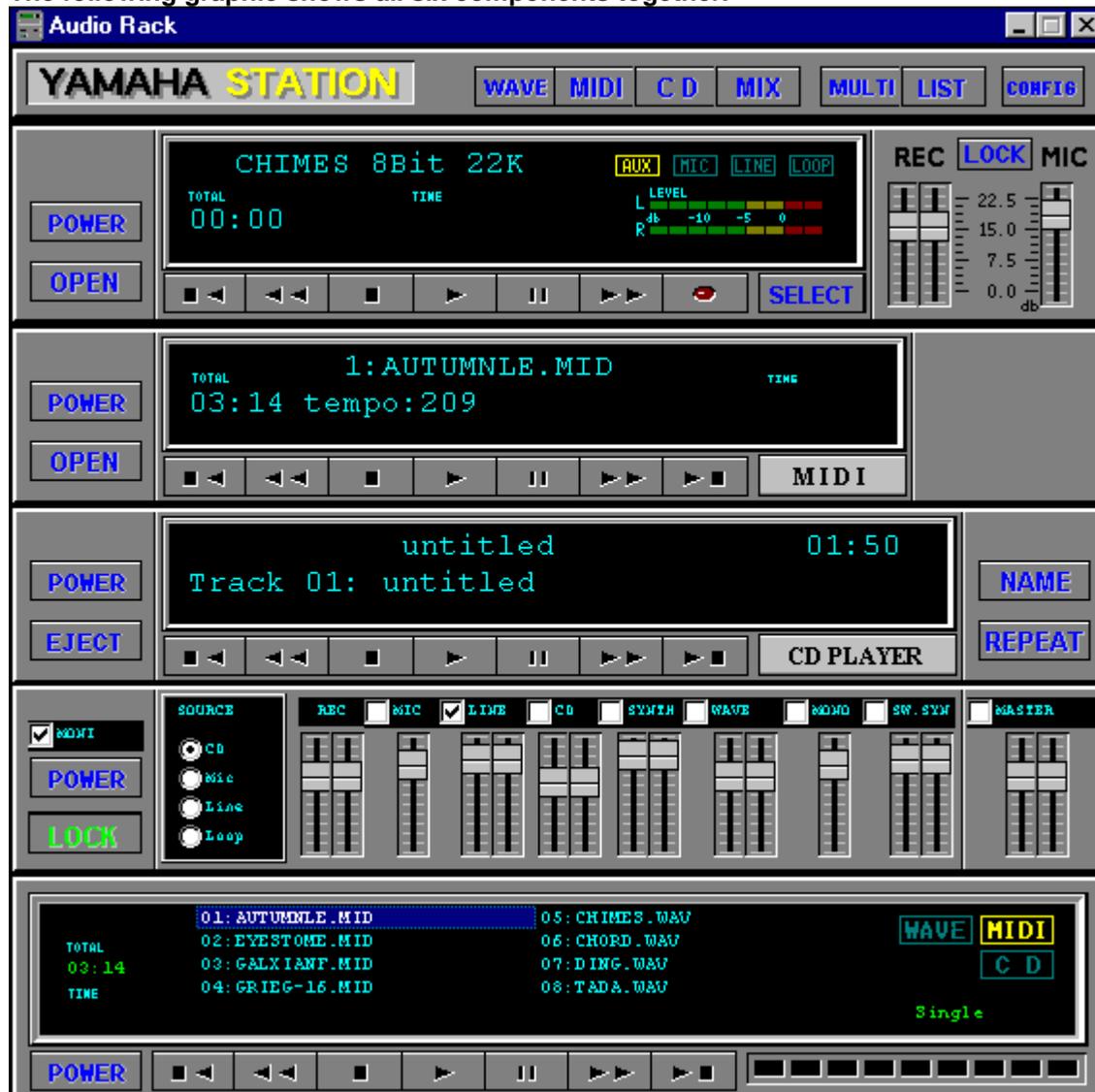
MIC Microphone input fader

Playback faders

LINE	LINE-IN or AUX input
CD	CD input
SYNTH	FM or Wavetable Synthesizer
WAVE	WAVE Playback
MONO	MONO IN
SW.SYN	Soft Synthesizer
MASTER	MASTER VOLUME CONTROL



The following graphic shows all six components together.



System requirements

- IBM-PC compatible computer with an 80286 as a minimum
- At least 1MB of available hard disk space
- Windows 3.1, Windows 95 or higher
- Sound board & its Windows driver
- MCI Extensions must be installed in the windows driver section

How to Play

Common operations of CD, MIDI, WAVE, and MULTI player.

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 audio players. So if you've ever used an audio player you'll find Audio Rack operation straightforward.

Square

Double Bars

Single Right Arrow

Double Left Arrows

Double Right Arrows

Left Arrow & Square

Right Arrow & Square

Power

Open

Stop

Pause

Play

Scan backward

Scan forward

Go to beginning of previous song

Go to beginning of next song

Show or remove component

Open File Open dialog box. Drag & Drop is supported via File Manager

CD player only functions

Eject

Repeat

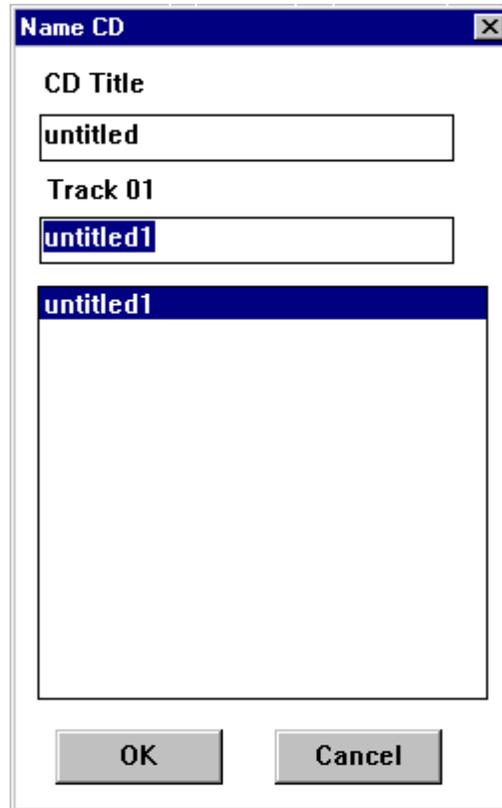
Open and close the CD-ROM drive

Repeat playback indefinitely

If your CD-ROM **drive** does not support the Eject function, nothing will happen when you click the Eject button.

Titling CDs

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 names. The CD title can be up to 26 characters long. Track names can be up to 28 characters long, although, only the first 19 characters are displayed on the CD Component's display



Please click the buttons, and experiment with the Audio Rack!

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 Play Mode can be set to **Repeat** so that the playlist items are played repeatedly.

Click the LIST button on the Power Control component.

In the Playlist dialog box, shown below, arrange your CD, MIDI, and WAVE data as desired.

You can enter the title of your CD.

See the sample screen on the next page...



Play Mode

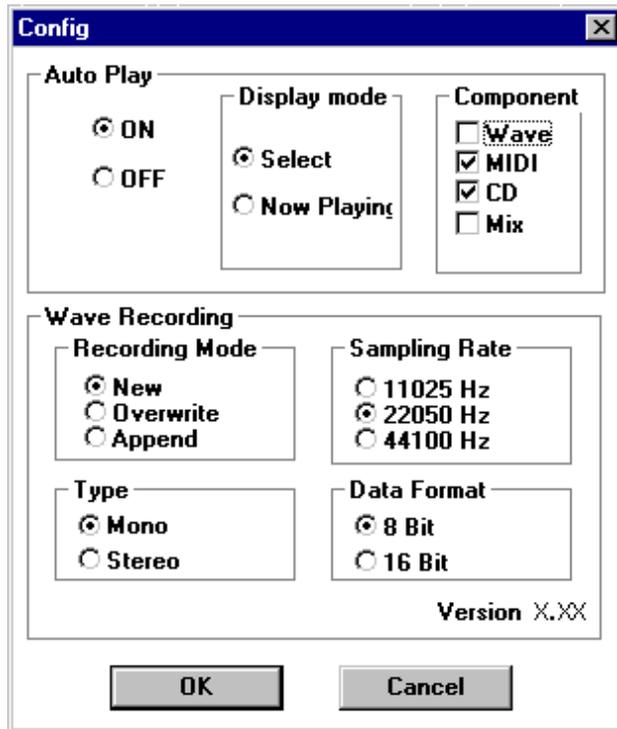
When set to **Single**, the data in the play list is played once.

When set to **Repeat**, the data in the play list is played repeatedly.

Clicking the OK button saves the play list in the \Windows\System\Audioruk.ini file. If the currently loaded CD is different to the one specified in the play list, an error message appears. This means that the song name on the CD does not match that in the play list. In this case you should edit the play list. Otherwise the error message will appear repeatedly.

Config

Click the **CONFIG** button on the Power Control component. In the Config dialog box you can configure the Audio Rack.



Auto Play

When Auto Play is **OFF**, the WAVE, MIDI, CD, and MIX components open when the Audio Rack is started.

When Auto Play is **ON**, data registered in the play list plays sequentially when the Audio Rack is started.

If Play Mode on the PlayList dialog box is set to Repeat and Auto Play is ON, data registered in the play list plays repeatedly when the Audio Rack is started.

Display mode

When Auto Play is **ON**, you can decide which components are displayed.

When set to **Select**, components whose box in the Component Select section are checked are displayed.

When set to **Now Playing**, only the component currently playing is displayed.

Component Select

The Component Select check boxes allow you to select which components are used for Auto Play. Components whose box is checked are used for Auto Play. These settings are active only when the Display mode is set to **Select**.

Recording Mode

New	Create a new file
Overwrite	Overwrite the existing file
Add	Append to the current file

Sampling Rate

These buttons allow you to set the sampling rate for recording Wave files.

Type

These buttons allow you choose either mono or stereo Wave file recording.

Data Format

These buttons allow you to set the data format to either 8 or 16 bit.

WAVE files are recorded in Mono, with a Sampling Rate of 22050Hz, and an 8-bit resolution.

Error Messages

The following is a list of Audio Rack error messages.

"Can't open window"

This message appears if a window cannot be opened when Audio Rack is started.

"Disc not loaded"

This message appears if you click the NAME button on the CD Component and no CD is loaded.

"The Wave data has changed. Save current changes?"

This message appears if you attempt to quit with unsaved changes.

"A Wave file with this name already exists. Overwrite?"

This message appears if you attempt to save a Wave file using a name that is already used.

"Can't get timer"

This message appears during playback if the Timer resources are insufficient.

"The CD loaded is different to that in the Playlist"

This message appears when you click the LIST button on the Power Component and the currently loaded CD is different to that specified in the Playlist.

Others: error messages supported by MCI are supported.



Useful E-Mail Addresses

If you find that the installation driver for your particular operating system is not included on this MMCD CD-ROM then please visit one of the following web sites for further information..

www.yamaha.com

YAMAHA Home Page

www.mmcd.com

MMCD Home Page

Thank you