



SPKQQ Ver.3.33E



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<1> INTRODUCTION

SpkQQ is a **shareware**. To use it on a continuous basis, please submit **US\$10.00** to the developer. For further information on registration, please read the [REGISTRATION](#) section.

LIABILITY:

Developers of this program will not take financial, legal, nor any other responsibilities that may result from usage of this program. Files contained in SPKQQ.LZH file are distributed "as is" and without any expressed and implied warranties. The user assumes the entire risk of using the software.

DESCRIPTION:

Recently, multimedia are becoming to come equipped on most personal computers, and sound boards are becoming common on most PCs. However, some notebook computers and entry model desktops still do not have DSP chips nor does they have sufficient slots to insert a sound board.

SpkQQ is Windows device driver to play *.WAV files using an internal speaker available on most if not all personal computers. It will allow computers without a sound board to play *.WAV files without any additional hardware. It even support some features that can not be duplicated by sound board alone.

Nevertheless, SpkQQ has following limitations:

- Calculations necessary to produce sound are executed entirely on computers CPU. This extensive use of CPU might pause an application while sound is being produced.
- An internal speaker, used to produce sound, might be inferior to those on a sound board.
- Sounds can not be recorded.

Even with these limitations, SpkQQ is capable of producing one of the finest sound possible on an internal speaker at an affordable price. I firmly believe that SpkQQ is an invaluable tool for Windows users currently without a sound board.

SpkQQ is a shareware. **After 1 week of trial period, it will stop producing sound.** To continue usage after this period, please register your copy. For further information on registration, please read the [REGISTRATION](#) section.

FEATURES:

1. Supports multi-tasking
Mouse may be moved while *.WAV files are being played. Furthermore, it will not interrupt RS-232C ports. Thus, communication programs may be executed while a sound is being played.
2. Supports over sampling
To produce the best sound capable on a PC, SpkQQ is capable of calculating system performance and tuning itself. This setting may be further tuned to produce the sound that you like to hear. It is even possible to play a sound at a higher sampling rate than the original recorded sound.
3. Plays most PCM and WAV format files
PCM-WAVE and ADPCM (requires MSACM.DRV - included with the Microsoft Windows Sound System) format files with the following specifications:
 - Sampling Rate: 8kHz-65kHz
 - Bit length: 8, 16 bit (8 bit quality)
 - Channels: mono, stereo (Left and Right are mixed)
4. Provides customization
Most sound parameters such as sampling rate, volume, and echoes may be changed by the user. With these parameters, effects commonly used by professionals may be added to a sound.
5. Includes driver installer and remover.
Special SpkQQ installer and remover are included in the package. Installation and Removal may be done from the SpkQQ program without any additional steps.



<2> INSTALLATION

SpkQQ is a Windows device driver and not an application. The software must be installed into a system as a device driver. Once installed, it will stay installed until it is explicitly [removed](#).

WARNING:

SpkQQ **must be installed and removed** using the included **SPKSETUP.EXE** setup program. Do not install it from the Drivers dialog box in the Control Panel. SpkQQ will not be properly installed.

REQUIREMENT:

Following hardware and software are required:

Hardware

- 80386SX or higher machine
- 4MB or more RAM
- 1MB of free hard disk space

Software

- MS-Windows 3.1

INCLUDED FILES:

Before installing SpkQQ in your system, please make sure that the following files are included in the SPKQQ.LZH file. If it is not, it is not a proper copy of the program. Please contact the [developer](#).

SPKQQ.DRV	SpkQQ Driver
SPKQQ9F.DLL	DLL for NEC 98 notebooks
SPKQQ98.DLL	DLL for NEC PC-9801 series computers
SPKQQAT.DLL	DLL for IBM-AT compatible computers
VXDSVR.386	Enhanced mode driver
SPKSETUP.EXE	Setup program (includes SpkQQ remover)
SPKDLG.DLL	Setup program dialog boxes
SPKSETUP.INF	Temporary file used during setup
SPKQQ.HLP	Help file
ORDFRM.WRI	Order form
README.TXT	Introductory DOS file (be sure to read this file before proceeding)

INSTALLATION:

WARNING:

1. SpkQQ setup program requires TADA.WAV and DING.WAV files. If either of these files are not in the \WINDOWS directory, extract them from the MS-WINDOWS system disk.
2. Near the end of SpkQQ installation or update, Windows must be restarted. Please close all applications before starting to install SpkQQ.

To install or update SpkQQ in your system:

1. Decompressed the SPKQQ.LZH file into a directory.
2. Run the SPKSETUP.EXE file from the Program Manager ([File]-[Run] menu selections) or from the File Manager. For more information on running program from the Program or the File Manager, consult the Windows manual.
3. When the SpkQQ Setup dialog box appears, choose the **[Install]** button if SpkQQ is not already been installed, or choose the [Update] button if SpkQQ is not already installed.
4. When the Environment dialog box appears, choose the circle to the left of the **[IBM/AT Compatible]**. The circle should turn into a bullet mark. (Choose the circle next to the [NEC 9801/PC 486 Series] if you really have a Japanese NEC computer).
5. Choose the **[OK]** button.
6. When the SpkQQ Installation dialog box appears, enter the drive and the directory name where the SpkQQ Help and sample *.WAV files are to be copied.
7. Choose the **[Start Installation]** button.
8. When the Restart Windows dialog box appears, choose the **[Yes]** button to restart Windows and finish the installation or choose the [No] button to exit the installation and restart Windows later (exit Windows manually). Windows must be restarted to use Spkqq.
9. If the [Yes] button was chosen, the installation program will copy the files to the drive and directory specified

and restarts the Window. SpkQQ Group with SpkQQ setup icon and several sample *.WAV files will be added to the Program Manager.

10. Choose the "**SpkQQ Setup**" icon.

11. When the SpkQQ Setup dialog box appears, choose the [**Customization**] button.

12. When the Customization dialog box appears, choose the [**CPU**] button to adjust to the optimum sampling rate on your PC. Next, choose the [**Test**] button. You should hear some music coming out from your PC.

If you did, SpkQQ is properly installed in your system. It will automatically be started every time Windows is started.

Choose the [**OK**] button to save the settings.

If you did not anything, try increasing the volume (drag the volume lever to the right). Choose the [Test] button again. If you still did not hear any music, please send us a mail.

If SpkQQ is installed in your system, you will be able to replay *.WAV files.

Try replaying some sample *.WAV files included with the program.

[If you are still having problems](#) installing SpkQQ.



If you are still having problems

If there is a problem installing or removing SpkQQ, please try the followings:

1. Be sure that there is at least 1MB of free hard disk space on the installation drive and on the Windows drive. If there is less than 1MB of available disk space, please delete some unwanted files and try again..
2. If SpkQQ still can not be installed or removed, file sharing system might be interfering. SpkQQ accesses the SYSTEM.INI file during installation and removal, but SHARE.EXE or VSHARE.386 may interfere and terminate the process.

In these cases, please disable these programs temporary.

- (a) Edit the **AUTOEXEC.BAT** file and insert REM before the SHARE.
i.e. REM C:\SHARE.EXE
- (b) Edit the **WINDOWS\SYSTEM.INI** file.
Search for [**386Enh**].
Search for DEVICE=VSHARE.386 and insert a ";" character before DEVICE.
i.e. ;DEVICE=VSHARE.386
- (c) Re-boot the system and try installing or removing SPKQQ.

Please re-edit the AUTOEXEC.BAT and WINDOWS\SYSTEM.INI file after installing or removing SpkQQ.

On the other hand, if SpkQQ still can not be installed or removed from your system, please contact us. [Support](#)



<3> SPKQQ SETUP

SpkQQ Setup dialog box is used to [customize](#), [install](#), [register](#), and [remove](#) SpkQQ from your system.

1. **Customize**

Opens the SpkQQ customization dialog box. Sound production parameters such as sampling rate, volume, and echo may be adjusted from this dialog box.

2. **Install**

Starts SpkQQ installation if SpkQQ is not already installed in the system. If old version of the program is currently installed, [Update](#) button will be displayed instead of the Installation button.

3. **Register**

Opens the SpkQQ registration dialog box. User registration information are entered from this dialog box. Once registered, registration dialog box will cease from appearing and you will be able to use it on a continuous basis.

4. **Remove**

If you wish to remove SpkQQ driver from your system (if you decided that it was not for you or if you decided to buy a sound board), choose this button. It will remove SpkQQ driver from Windows (files are not deleted). This button can only be selected when the SpkQQ driver is currently installed in Windows.



3.1 CUSTOMIZATION

Sound quality depends on speaker and its surrounding circuits, but they differ for each computer model. To produce the best possible sound on your system, sound parameters should be adjusted to best match the available system resources. Eventhough, some noise may still remain after parameters are adjusted, sound quality can be improved.

Volume

Volume radio box controls the sound volume. The lever may be moved from 0 (lowest volume) to 100 (highest volume).

10 is the actual highest volume of the recorded sound, but most waves have not reached a maximum amplitude at this setting. Increasing the volume setting over 10 will distort the amplitude but produces louder sound. This distortion is noticeable if a loud sound is played at a volume setting over 10.

Sample Rate

Sample Rate radio box controls the interval at which sound wave is to be sampled. The lever may be moved from 10k to 200kHz.

Theoretically, higher sample rate produce better waves and thus better sound. In actuality, CPU and I/O system speed limit the sampling rate possible on a system. Adjusting the sampling rate over this optimum limit will distort the produced wave and produce noise.

To automatically measure the sampling rate, choose the **Calibrate** button. Moving it a little above or below this default setting is the optimum setting.

WARNING:

If **Boost** and **Delay** options are changed, Sampling Rate should be re-adjusted.

Slow CPU

Some PCs do not have enough resources to produce quality sound just using an internal CPU. If the sound does not seem quite right even after lowering the sampling rate to 10kHz, check this option. Checking this option will put less demand on the CPU, but it will lower the quality of the sound.

Calibrate

Choosing the [Calibrate] button automatically calibrates the optimum **Sampling Rate**.

On a fast machine, Sampling Rate may be set to a higher value than 100kHz, but it's usually the case that the actual optimum setting is somewhere between 40kHz and 50kHz. (^ ^;)

Boost

If there are noises when low bass sounds are played, check this option. Volume of low to medium waves are increased to lessen wave interference. Checking this option, however, distorts some sounds.

WARNING:

Sampling Rate must be readjusted after changing this option. If it is checked, Sampling Rate should be lowered.

Mute

To make programs from producing sound, check this option. This is very handy if you want to play an action game that does not have a sound option.

Disable External Control

To stop other programs from changing the volume setting, check this box. It will keep the volume constant throughout all applications.

Some programs such as After Dark change the volume when they activate but do not reset them to the original setting when they are closed.

Level Volume

To increase the volume without increasing wave interferes, check this option.

Membrane on a speaker is an elastic material and resonate when a sound is produced. When waves with high and low amplitudes are played, resonant waves tends to interfere with each other and produce sound waves with lower amplitudes. This option will increase amplitudes of low amplitude waves and decrease amplitudes of high amplitude waves to make them more uniform and lessen wave interference. Thus, sound wave files with higher total amplitude are produced.

WARNINGS:

1. **Sampling Rate** must be readjusted after changing this option. If it is checked, Sampling Rate should be lowered.
2. **Volume** should be set lower than 10 to avoid noise.

Delay

Various echo effects may be added to a sound without changing the original wave file.

Choose the Adjust button to open the Delay Adjustment dialog box where delay parameters may be set..

WARNINGS:

It is recommended that **Sampling Rate** be **Recalibrated** when Delay parameters are changed..

Delay Time

Set the delay time in millisecond intervals.

- 1 - 30 Flanger effect
- 100-199 Short echo effect
- 200+ Echo effect

Delay Level

Set the volume of delayed sound. The level can be moved between 0 (lowest volume) to 8 (highest volume).

When it is set to 8, the delay will have the same volume as the source sound.

Feedback

Set how many times the delay is to be repeated. The value can be set between 0 and 8. When it is set to 0, there are not delayed effect. On the other hand, when it is set to 8, the sound will be repeated without decaying.

Test

Play the *.WAV file specified by the **Test File**.

Test File

The name of *.WAV file to play when **Test** button is chosen. A Test Selection dialog box can be opened by choosing the **Browse** button to assist file selection.

Disallow Interrupt

Disallow all interrupts when a sound is being produced. Checking this option creates better sound.

WARNING:

When this option is checked, the mouse pointer may not be moved, characters may not be entered from a keyboard, nor telecommunication software be used when a sound is being produced.

FM Sound

Use the FM Sound system instead of a regular internal beeper.

Actually, the internal beeper will produce a better sound because FM sound system is a 4-bit sound system while an internal beeper system is a 8 bit sound system.

NEC 98 Note

Select this option if SpkQQ is running on a computer like NEC 98 note (Japanese model) which controls speaker volume by software.

Save

Checking the Save button captures the next produced sound to a file. It may be used to record sound produced by Video for Windows and by games.

To use:

1. Check the **Save** button.
2. Enter the file name to save the sound in the **File Name**.
3. Choose the **OK** button.
4. Play the sound.

NOTE:

After saving to a file, the Save box will automatically unchecked.

Register

To register you copy of SpkQQ, choose the **Registration** button.

SpkQQ.Drv:

Displays the version of current SpkQQ driver. This field will be blank if the driver is currently not installed in the system.

OK

Save the current settings to the **WIN.INI** file and close the Customization dialog box.

Cancel

Close the Customization dialog box without saving the changes.

Help

Display SpkQQ help



3.2 REGISTRATION

SpkQQ is a shareware. To use it on a continuous basis, you will need to register (US\$10.00). With registration, you will receive

1. A registration number which will stop the registration dialog box from displaying on your screen
2. Right to use SpkQQ on a continuous basic
3. Support

If possible, please register through [SWREG](#) forum on the CompuServe:

SWREG ID: **3999**

If you do not receive a registration number within 1 week after you register by SWREG, please send us a mail.

If you can not register through SWREG, you can send us a check or a money order:
fill out the included [ORDFRM.WRI](#) and send it with a check payable to

Yasuko Ozawa
Unipac Tours, Inc.
151 N. Michigan Ave.
Doral Plaza, Suite 1902
Chicago, IL 60601
U.S.A.

If you send us a check, we will require from 4 to 6 weeks to process the check and to send you a registration number. If you still do not receive a registration number after this time, your mail may have become lost. Please check if your check has been cashed and if it has, please send us a mail.

New version of SpkQQ will be available in CompuServe libraries.

Registered users are free to download any new version and use them with the same registration number.

Be sure to test that SpkQQ runs correctly on your system before registering.

[Support](#) for SpkQQ is provided by Internet and CompuServe E-mail. If you have any question, opinion, suggestions, or other comments, please send any E-mail to:

Hitoshi Ozawa	Internet:	HCC00417@niftyserve.co.jp
	CompuServe:	100220,3402

WARNING:

We will not be available on the following days:

[Dec. 22 to Jan.6](#)

[April 22 to May 10](#)

[August 1 to August 17](#)

Registration submitted in these days will be processed after we return.



3.3 REMOVAL

If after a week, you decide that you do not want SpkQQ on your system, remove the SpkQQ driver from your Windows by executing the following steps:

1. Open the SPKQQ Setup dialog box.
2. Choose the **Remove** button.
3. Choose the **YES** button to remove the SPKQQ driver.
4. Choose the **YES** button to remove SPKQQ and its settings..
5. Choose the **YES** button to restart Windows.

[If you are still having problems](#) removing SpkQQ.

WARNING:

Near the end of SpkQQ removal process, Windows will be restarted. Please close all applications before initiating the following steps.

NOTE:

SpkQQ files including the registration file will not be deleted when SpkQQ driver is removed from Windows. Therefore, if you do not delete these files, SpkQQ may be re-installed on to your system without re-registration.



<4> Q & A

Some commonly asked questions are answered below:

1. If for some reason you are unable to restart Windows, do the following steps:
 - a) Boot up DOS.
 - b) Move to the drive where the Windows is installed.
(e.g. C:)
 - c) Move to the Windows directory.
(e.g. CD WINDOWS)
 - d) Copy the SYSTEM.SPK to SYSTEM.INI
(i.e. type COPY SYSTEM.SPK SYSTEM.INI)
 - e) Try starting Windows once again.

If you still cannot start Windows, please send me a mail with your system configuration.



<5> MISCELLANEOUS

DISTRIBUTION:

This file can be freely distributed if the following conditions are obeyed:

1. If it is to be copied to another forum or to another distribution channel, please contact the developer to let us know exactly where it is to be copied. We will need this information to maintain and upgrade Graffiti for Windows at all locations.
2. This program can be distributed only in the original archived SPKQQ.LZH formatted file. Do not change this file or any files within.
3. Please make it apparent that SpkQQ is a shareware. Please state it this in the program description.
4. If this program is to be mentioned in any article, please send a E-mail to one of the developers.

The developer is willing to discuss other means of distribution. Please send a mail to one of the E-mail addresses below.

COPYRIGHT:

SpkQQ is copyrighted by Hiroki Nakayama. No part of program, data, or any other file in the SpkQQ.LZH file may be reproduced, in any form or by any means, without permission in writing from Hiroki Nakayama.

Afterthoughts

My work involves using computers and music synthesizer. With the current trend toward faster CPUs, software could be written to produce better sounding digital signals and my work began to become more exciting. Within this circumstance, SpkQQ is a very handy tool that it allows me to sound wave files from my Windows.

I actually want to make a speaker driver supporting timer interrupts. If I could develop such a program, I will be able to run other processes (e.g. applications) while producing sound. Of course, with this program I will be able to play AVI files and watch moving pictures while listening (if CPU speed permits). With DOS, I was able to create such a driver, but it just does not seem possible with Windows.

To produce a speaker driver capable of interrupts, the timer interrupt must be at least 10kHz. Most software (not only Windows software) do not permit long interrupts. Windows device driver (probably the display driver) seems to forbid long interrupts. Even with 486DX2-66MHz machine, I was only able to get 1kHz interrupt. 1kHz does not create a very good sound, so I had not choice but not to support timer at this stage.

In recent year, copyright on sound files is becoming a problem, but the sample wave data included with the program was recorded by me. Please listen to it as much as you like (^_^).

Hiroki Nakayama

Other Programs by the Hiroki Nakayama

Following programs are available(as of October 14, 1994):

1. Graffiti (FREEWARE

Draw a graffiti on your Window. Supports spray paint, pen, bloody paint and other fun drawing components.
WINFUN - 3 GRAFTI.LZH.



<6> SUPPORT

Support for SpkQQ is provided by CompuServe E-mail.

If you have any question, opinion, suggestions, or other comments, please send any E-mail to:

Hitoshi Ozawa CompuServe:100220,3402 (LDD00657@niftyserve.or.jp)
Hiroki Nakayama Nifty Serve:SGT02603 (SGT02603@niftyserve.or.jp)

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