Mod4Win Help Index

Welcome to the help for Mod4Win 2.11 -- the only HIGH-QUALITY MOD-Player for IBM-compatible PCs running Microsoft® Windows™.

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Features
Mod4Win is a player for digital music modules
on IBM-PC compatible machines running Microsoft Windows™

- **Mod4Win 2.11** supports:
  * NoiseTracker (`*.NST`), Pro-, Fast-, and TakeTracker (`*.MOD`), Grave Composer (`*.WOW`), Oktalyzer (`*.OKT`), ScreamTracker 2.x (`*.STM`), ScreamTracker 3.0 (`*.S3M`), Composer 669 and UNIS 669 (`*.669`), Farandole Composer (`*.FAR`), and MultiTracker (`*.MTM`) modules with up to **32 channels**
  * Sample rates between 11 and **48 kHz**
  * 8 and **16 bit** sample depth
  * Mono, **Stereo**, and **Stereo Surround Sound**
  * Interpolated Dynamic Oversampling (**IDO**)

- Full **archive** support
  * Supports ARJ (`*.ARJ`), LHARC (`*.LHA`, `*.LZH`), and PKZIP (`*.ZIP`)

- **Jukebox** function for up to 2999 MOD-Files in one session
  * Generates **playlists** (`*.MOL`) with files from up to 100 directories or archives
  * **Drag & Drop** feature of one or more modules, archives, and playlists
  * Launching of a module, archive or playlist from a **command line** parameter

- **Intuitive** and easy to use **interface** with complex functionality
  * **Hotkeys** for all player functions, many of them user-definable
  * **Mini Status** uses minimal desktop space and stays optionally always on top
  * **Effect Panel** shows current effects, instruments, notes, volumes, and speed
  * Integrated **File Manager** to copy, move/rename, and delete modules from and into drives, directories, archives, and list files
  * **Quick Selection Box** displays all modules in your current playlist and lets you select one immediately

- Mod4Win **saves** all **settings**, such as
  * window positions
  * last accessed directories
  * sound card and wave driver settings
  * optionally the **complete current status**, so the next session will start exactly where you stopped the last one

Drag and Drop is a feature of Windows™ 3.1 (and newer versions) and means, that you can drag a file out of the file manager or another desktop manager and drop it onto an application (by grabbing the file with the left mouse button in your file manager, dragging it over to the appropriate application, and releasing the left mouse button).   It's then up to the application to process the file(s).

System Requirements

Sound:
- A **sound card** with at least one DAC that can process sampling at 11 kHz or better and an appropriate asynchronous **wave driver**, also known as an **MPC-2 compatible wave device**.
- <u>Note</u>: DAC emulators like **speaker.drv** cannot be supported.

Processor:
- AT 386 SX/16 as the absolute minimum to run the program.
- **AT 386 DX/20** for playing at the highest sample rate.
- AT 486 DX/33 with 8 MB RAM to use Mod4Win as a background jukebox at 44 kHz and 16 bit stereo sampling.
- <u>Note</u>: To play modules with more than 8 channels using IDO, a faster processor may be required.

Video:
- A **VGA video adapter** with at least 16 colors simultaneously.
- Suggested **video resolution 800 x 600** to show the Main Dialog, Info Window, and Effect Panel without overlapping.
- <u>Note</u>: With a **Hercules** or **Monochrome** adapter many of the dialogs will appear unreadable.

Operating System:
- **Microsoft Windows 3.1** or higher running in **386 enhanced mode**.
- <u>Note</u>: This version of Mod4Win will not run on 286-based machines anymore, neither will it run under Windows in standard mode.

For a more detailed discussion of System Requirements see also the sections
  <u>Known Problems</u> and
  <u>Frequently asked Questions (FAQ)</u>.

Authors

Mod4Win was written and designed by **Kay Bruns** and **Uwe Zänker**.   The loader routines for the **FAR** and **S3M** format, the shareware routines, the English translations, and the English version of the Help file were written by **Jens Puchert**.

This program was thoroughly ß-tested.   However, if you discover any malfunctions or bugs (you never know), feel free to write your comments to:

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PS: Please, constructive contributions only.   Send junk mail and flames directly to **/dev/null**.
PSS: All bugs are my cat's fault anyway...

Further Projects

If the months of development work for Mod4Win **pay off,** we plan the following projects for the near future:

1. Some day when most people will have an i486 DX/50 or better, we will provide **digital software filters** for this and other programs.   Actually we planned on solving the problem with the Harmonics in the previous version of Mod4Win, but the still fairly common 386 DX/40 (some folks even run Windows™ on a 386 SX/16) just doesn't have the power to do that.   With these filters, harmonics, tinkling and other distortions will be a matter of the past. But until then there's still some way to go...

2. Before that we're planning to develop a **semi-professional PC sound studio** on sample basis. With that you'll have the tools to edit MOD-Files and a new type of music files.   It will provide 32 channels, 16 bit, real stereo, professional mixer, sampler, sequencer, and MIDI-support.

3. We also plan for a **Mod Player for the OPL-4** (voice synthesizer) chip from Yamaha.   Then it will be possible to realize 16 bit sampling on 16 stereo or 32 mono channels, with relatively low exertion.   Each of these channels will also have a filter and, depending on the sound card, CD quality.

4. A **CD Player** that looks like Mod4Win, features a data base for your disks, and has all functions of a professional CD player.   This player, however, won't cost you hundreds of Dollars.

Known Problems

Problems with sound cards:

Several sound cards claim to support multiple sample rates, but then don't play at these rates but at any others they like, that means the **play** rate seems to be **too fast or too slow**.   For instance the Sound Blaster 16 ASP reports being able to play at 48 kHz, then however starts to **howl terribly**, since it is only capable of playing at 44 kHz.   The same thing happens if you switch from mono to stereo with the Pro Audio Spectrum.   These errors are caused by neither Mod4Win nor the wave driver, but simply by the sound card hardware.

Solution: Buy a different sound card, bear the sound, or adjust to a sample rate that can really be played.

Problems with (BUGS in) sound drivers:

General solution for these problems:

Because we didn't have one bug free wave driver during the test phase of the program, we can only give the following advise:

Ask the manufacturer of your sound card for an updated wave driver!

The drivers of the Sound Blaster and Audio Blaster don't automatically adjust their filter frequency to the sample frequency.   That results in the fact that the MOD-Files **sound dull.**

Solution: Use your mixer utility to turn the filter off!

The wave driver of the Sound Blaster Pro 2.5/3/4 reports being able to sample at more than **22 kHz 8 bit stereo**, but of course, is incapable of doing that.

Solution: Switch to mono at sample rates higher than 22 kHz.

Windows™ only supports the following sample rates: 11, 22, and 44 kHz.   Therefore it may happen that you see an error message like **"General protection fault"** or something similar.   The reason for that is not Mod4Win (because that asks the driver whether it can play the selected sample rate or not), but the clever programming of the wave driver.

Solution: Select only the sample frequencies 11025, 22050, or 44100 Hz.   Also make sure that the switch for Change Sample Rate in kHz Steps is **OFF**.

If you have only one wave driver installed, then it is possible that another application tries to access it while Mod4Win plays.   This could happen for instance if an application wants to generate a system sound.   Then some wave drivers will switch the actual sound output (that's the one from Mod4Win) from stereo to mono or modify the sample rate, without notifying Mod4Win.   As a result you will hear a much **too fast sampled output**, or even **extreme distortions**.

Solution: Install a second wave driver that the other application can utilize while Mod4Win plays.   If you don't have a second sound card or a second driver for your card, you can use **speaker.drv** as a last resort.

Problems with video drivers:

With some video drivers you might notice that while Mod4Win (or any other sample output producing program) plays, that the wave output is **rhythmically interrupted**.   This sounds like bubbling or scratching.   This can be most easily resolved by choosing a different video mode or color resolution.   You can also try to switch from stereo to mono.

Problems that look like BUGS (but are not):

Windows™ or Mod4Win reports **'Less than 500 KBytes memory available!'** although you have plenty of it.   The reason for that is that Mod4Win makes sure there is at least 500 KB left for other applications.   If that's not the case, you'll see the error message.   The same thing happens if Windows™ fragments the memory too much, that means the memory is divided into many little segments, and therefore not enough continuous memory available for other applications.

Solution:
* In the first case (less than 500 KB free): close applications, increase swap file size, or **buy more memory**.
* In the second case (memory fragmented): stop Mod4Win (not pause!), start application, restart Mod4Win.

Some wave drivers don't recall exactly where they have been paused.   Instead they will perform certain byte flips that are not very pleasant for the ear.   Therefore the song will be recalculated from the start after a **Pause**.   This wastes valuable buffer time, but at least it resumes with the regular sound.

Tuning Tips:

When you sample with 48 kHz 16 bit stereo, and at the same time run an application that requires a vehement video output and intense interaction with your hard drive, the expansion bus of your machine has a heavy load to carry.   If you have a **standard ISA bus,** this might easily strain your system (bus) capacity.   With an advanced bus design, such as EISA, MCA, or VESA local bus, you don't have to worry about overloading the bus.

Advice: One way to overcome the bottleneck of a standard ISA-bus is to increase the clock rate of the bus.

!! Caution !!
Some peripherals won't work properly at a clock rate higher than the 8 MHz that the ISA-bus standard suggests.   In this case severe damage to some hardware components might occur.   We don't assume any responsibility for damages resulting from changing your system's bus clock rate.   Many machines however run at a higher clock rate of up to 12-16 MHz without problems.

If you have **only 4 MB RAM** then it is not very recommendable to work with sample rates higher than 32 kHz, and/or 16 bit, and/or stereo, because the buffer needs about 128 to 192 KB of your main memory for every second of sample data.   Moreover the MOD-File requires some space (up to 2 MB, but normally about 100-300 KB), and after all, Windows™ itself and the other applications need memory too.   Then your total memory can fill up very quickly.

To listen to a module from your Windows™ swap file in such a situation isn't exactly the excitement you were looking for.

Advice:
* For a machine with limited memory we recommend 32 kHz at 8 bit stereo with 40 Buffers.
* For a fast machine with little memory we suggest Interrupt Mode and 5 buffers.
* For a slow machine with much memory we suggest Timer or Task Mode and maximal buffers.

For more information about Problems see also the section **Frequently asked Questions (FAQ)**.

Frequently asked Questions

About weird MODs

Q: One of my MOD files **sounds really weird** compared to other players.

A: We have put an immense amount of work in enhancing the player routines.   This release of Mod4Win supports all ProTracker effects, panning, and BPM-speed.   However, there is always a slight chance, that a command wasn't implemented the same way the original composer intended to use it.   This is especially true for some of the descendant MOD-Formats.   If you have a file that doesn't sound as you would expect, please contact me about the problem and I will probably ask you to send me the module, as I will need it to find out what the reason for this particular problem is.   There are thousands of modules that Mod4Win plays just fine, but there is always this possibility...

This does NOT refer to files that cause an error message like "CORRUPTED FILE" or "UNSUPPORTED FILE".   Those files are either too damaged to be played or in a currently non-supported Format.

About odd sound drivers

Q: I am having problems trying to get the MOD4WIN program to work on my GUS.   It's a Windows MOD player, and I have never had problems with Windows based programs before.   It locks for me when I try to switch to 16 bit mode in any frequency other than 11 kHz.   I believe the WIN drivers for the GUS only support certain frequencies with 16 bit.

A: Many problems turn out to be caused by the sound wave driver, the sound card itself, or certain system setups.

In general Mod4Win does not depend on any hardware specific features.   It only uses the **wave driver interface** for the sound output and therefore should work just fine with any setup that claims to support MPC.   However this is in theory only and odds are that in practice it is a little different.

For the vast majority of users however, there won't be any problems and Mod4Win will play all their MOD-Files flawlessly.

Q: My **system freezes** when I try to play Mod4Win on my GUS.   I can't switch to stereo on my GUS.

A: This problem should be solved with this new release.   The problem here was neither Mod4Win nor the GUS sound card, but only the wave driver the GUS ships with.   Frankly, this wave driver is one of the worst of all sound cards we've tested.

During the <u>Setup Dialog</u> Mod4Win asks the wave driver if it is able to play at the selected settings.   The wave driver keeps answering "yes", but in fact supports only very few sample frequencies.   Since Mod4Win doesn't know whether it's running on a GUS or any other sound card, it takes this for granted and tries to play at these settings.   Then the wave driver suddenly decides not to play and hangs the system.   So to be correct, it's the GUS wave driver and not Mod4Win that causes your system to lock, but since Mod4Win is the application that called the service of the wave driver, Windows will blame it on Mod4Win.

With this new release of Mod4Win we implemented a more stable approach to this problem by allowing wave drivers that appear to behave subnormal to select only the standard sample rates Windows supports, that is 11025, 22050, and 44100 kHz.   For more information on this topic see also <u>Change Sample Rate in kHz Steps</u>.

Q: I have a Sound Blaster 16 ASP, and although MOD4WIN was able to identify the driver, **hardware setup** was not automatic.

A: This is due to the incompatibility of some wave drivers that don't conform to the MCI standard and just crash when we ask them if they are able to play certain settings (for instance the GUS Windows driver).   We are working on that and hope to re-enable it as soon as possible.

About PC speaker drivers

Q: I have been playing with Mod4Win and I don't have a sound card yet, but I'm playing around to see what's available when I buy one.   I do have the PC-speaker driver installed and every time I try to play a MOD I get the "use WAVE_ALLOWSYNC flag" message.

I know I really can't get full capabilities w/o a sound card, but I'd like to try this app. out because it seems pretty cool.   Any help would be appreciated.

A: The error message you see is generated by the MCI waveform sound driver you installed in your Control Panel, not by Mod4Win.   We just put it in our own message box.   There is no way you could make Mod4Win run with **speaker.drv**.

The <u>System Requirements</u> section in this help file says very clearly that you need an "asynchronous" wave driver, and that "**speaker.drv** cannot be supported".

In case you are interested, let me explain it a little more technically:

Mod4Win requires an asynchronous wave driver, that means a wave driver, which can play sound by itself, without utilizing the CPU.   A wave driver that drives a sound card is asynchronous and works in the following way: You point the driver to a certain memory location and pass a number of parameters that describe the sound format, and the hardware will then read the data from the memory through its DMA (direct memory access) channel

and play by itself (simplified).

The speaker driver cannot do this, because there is no hardware to handle the sound output. The driver emulates a DAC (digital-analog converter), but does this through massive utilization of the CPU, that means, while **speaker.drv** plays a wave file, you can't do anything else on your computer.   Even if you have interrupts enabled, that means nothing else but that you can move the mouse and that your keyboard input will be placed in the message queue.

Mod4Win cannot support this, since it requires a lot of CPU time by itself for generating the sound in all the channels and mixing them together.   So eventually it had to stop the sound output to calculate more.   That doesn't make sense for a background MOD player.

So after all, you should consider getting a sound card.   If you get a card that is capable of 16 bit stereo playback at 44 kHz, you won't be disappointed by the quality of the sound that Mod4Win produces.

About BPM, IDO, Panning, and Pre-Amplification

Q: One of my MODs only plays a note every five seconds, it just **keeps dragging along**...

A: You may have a very old module (created with Noise- or SoundTracker) that uses a speed setting greater or equal 32.   Mod4Win usually interprets these settings as tempos (beats per minute), but in some MODs they're meant to be ticks per division, just like values less than 32.   Since there's no way to tell which interpretation is correct, Mod4Win lets you Disable BPM Speeds if necessary.   Just click the BPM symbol in the Main Dialog.

Q: My modules seem to **loose** some of the **high frequencies** when I use IDO.

A: Yeah, that's the whole point.   Although it might sound better to you because you've gotten used to it, these high frequencies don't belong there.   They are the result of harmonics produced by the mixing routine and the lack of digital filters to remove them.   If the module uses samples of excellent quality, you shouldn't hear much difference between sampling with IDO and without, but if there is a difference I can assure you the way it sounds with IDO is how it was supposed to.   This becomes especially noticeable with some older modules in the original MOD format that use pretty poor quality samples. Oversampling without IDO then produces some very nasty harmonics that can be heard as clinking throughout the module.

Q: The **CPU meter keeps getting into the red range** on my machine, especially with more than 8 channels.

A: Yes, these high-channel modules put a high load on your processor.   Although the mixing

routines in this release are 30-50 % faster than in the previous one, on slow processors you may still exceed your machine's resources.   There are several ways to lower the CPU Load, so you can still listen to your favorite modules:

1. Disable Panning.   If the module uses panning, the panned channels are mixed into both, the left and the right output.   This adds considerably to the CPU load and is sometimes not that much of an improvement.   With panning disabled, the pan position for each channel will be set to either left or right, depending on what's closer.

2. Disable IDO.   Although a great improvement for the listening experience, IDO will increase your CPU load dramatically, up to doubling it, depending on other factors.   Without IDO there will be more harmonics in the output stream, but in modules with high-quality samples and many channels this tends to be less noticeable anyway.

3. Lower the Sample Rate: Sample rate and CPU load are directly proportional, so by decreasing the sample rate you will always see a reduced CPU load.   Unfortunately, sample rate and sound quality are directly proportional too.

Q: Sometimes I hear these really **annoying scratchy sounds**.   I don't think that's been a problem in version 2.00.

A: The module you're playing is over-amping, or in other words, the pre-amplification is set too high.   Use the PreAmp Slider to reduce the value until the scratchy sounds disappear.   This is the optimal setting for this module.

It is important to understand that the PreAmp slider is **not a volume control**.   It's more like a **quality control**.   You can use it to maximize the output quality (dynamics and SNR) by finding the highest value at which the module doesn't over-amp yet.   Unfortunately this value is different for every module, depending on the number of channels, the quality of the samples, and much more.   If you enable Automatic PreAmp in the Setup Dialog and set the slider to 0 dB you should never have a problem with over-amping modules and get a pretty good approximation for the optimal setting.

How to get more out of Mod4Win

Q: How can I start Mod4Win from the **File Manager**?

A: 1. Open your File Manager.
    2. Go to File | Associate...
    3. In the Associate Dialog, after Files with Extension type **MOD**.
    4. Then click on Browse and go to the directory you installed Mod4Win into (by default c:\ mod4win).
    5. In the files box select **mod4win.exe**.
    6. Hit OK to close the Browse Dialog.

7. Repeat steps 3 through 6 for the following extensions: **NST**, **WOW**, **OKT**, **STM**, **S3M**, **669**, **FAR**, **MTM** (modules), **ARJ**, **ZIP**, **LHA**, **LZH** (archives), and **MOL** (list files).
8. Hit OK to close the Associate Dialog.

All your modules, archives, and list files will be displayed as documents now and double clicking on one will launch Mod4Win with the respective file already loaded.

Q: Just a suggestion for your already great MOD player: You should allow users to create **list icons** in Windows.   What are they exactly?   Well, you should allow users to create a list file, but be able to make an icon for **Program Manager** out of that which has the option of "Auto Play at Startup".   So now, you have an icon which, when run, will automatically load Mod4Win, and play the modules listed in that icon automatically.   This would allow users to create icons like "Old Time Favorites" and placing them in the Startup group so that it **plays automatically** when Windows starts.

A: That's a very good idea.   Fortunately, this functionality is already an integrated part of Windows.   To create your list icons do the following:

1. Make associations for all relevant file types as explained in the previous answer.
2. Create and save the playlist in Mod4Win using the Open Dialog.
3. Then go to the Program Manager.   Go to your Mod4Win group or make a new group for your list icons.
4. Now go to File | New | Program Item.   This will bring up a Program Item Properties dialog.   After Description type the name for your list icon, like **All Time Favorites**.
5. After Command Line type the full path name of the list file you created with Mod4Win in step number 2.   All these list files have the extension **.MOL**.   So if you saved a list with the name "myfavor" in the directory c:\mod4win, then type here **c:\mod4win\ myfavor.mol**.
5a. Alternatively to step 5 you can use the Browse button.   Make sure you type ***.MOL** under File Name or select All Files under List Files of Type.   Then simply go to the directory you saved the list file in and select it.   Click OK to close the Browse Dialog.
6. If you want Mod4Win to run as an icon, check the Run Minimized box.   Then click OK to close the Program Item Properties dialog and you'll see a new icon for Mod4Win with the name of the list appear in the Program Manager group.
7. If you want to play this list upon startup automatically, copy the so created icon to your StartUp group using F8, or drag and drop it with the mouse.
8. To create more list icons, repeat steps 2 through 6 as often as you like.

Q: Being able to see the **"instruments"**.   Many of the song authors have used this space to include information about themselves, how to contact them, etc., etc., but so far I've found no means of seeing this information while using Mod4Win.

A: In the Main Dialog just click the Info Button or hit I.   That will bring up an Info Dialog containing the instrument names (or the author's other remarks - whatever they chose to put

in there), file format, size, and many other information.   Use this help file to learn more about Dialogs and Hotkeys in Mod4Win.

Q: I just downloaded MOD4WIN - can't find a **version number** anywhere.

A: The version number is shown in the About Dialog (double-click on any non-active element in the Main Dialog or hit A) and in the Help File.

Q: Can I view a **queue list**?

A: With queue list I assume you mean the playlist.   If so, you can view it by launching the Open Dialog (click Open or hit O).   All the titles in the list will be shown in the Playlist window on the right.   Since version 2.10 it is even easier to see all the titles in the playlist at once by opening a Quick Selection Box (click into the Info Window or hit L).

Q: While I really like the sound quality of Mod4Win, is it possible to **reduce the amount of memory** required by the program?   My system runs on 4 MB RAM only and I also wish to have other applications running at the same time.

A: The memory required to buffer the output data is directly proportional to all of the following:

*   sample rate (11-48 kHz)
*   resolution (8/16 bit)
*   channels (mono/stereo)
*   number of buffers (2-99)

The first 3 parameters directly influence the quality of the sample data.   Since you don't want to compromise the quality, you can only change the number of buffers to reduce the amount of memory needed.   Indeed there is a wide range to choose from: the minimum is 2 buffers and the maximum is 99.

Buffers are needed because Windows doesn't guarantee an application to get processor time when needed.   Instead Mod4Win depends on the kindness of other programs to give up the processor for a while.   When an application shows the hour glass, it doesn't want to give up the processor because it needs the full processor power for itself.   All other applications are then suspended and have to wait for the one that ties up the CPU.   The same thing happens when a DOS session is run full screen.

Since you want to hear your MODs continuously, even when an application shows the hour glass for a while, Mod4Win calculates some song data ahead, just as much as fits into the buffers you reserved.   Even when Mod4Win doesn't get CPU time, the asynchronous wave driver will continue to move song data from memory to your sound card.

The reason to have more buffers is to overcome longer periods without CPU attention.   One buffer is big enough to hold 200 ms of sample data.   So the total range is from 0.4 sec (with 2 buffers) to roughly 20 sec (with 99 buffers).

If you usually don't see the hour glass for more than a few seconds (or don't mind a little interruption in play back once in a while), you can safely decrease the number of buffers to whatever makes you feel comfortable in terms of memory utilization.   It doesn't influence the play back quality.

Another way to reduce memory is by running Mod4Win in Interrupt Mode.   Then you can go down to the minimal amount of buffers because there's no need to buffer much data.   However, you'll need a fast machine to achieve a comfortable multitasking behavior in this mode.

About the mod4win.ini file

Q: What settings must I **modify** directly in the **mod4win.ini** file?

A: There's no need to modify any settings directly in the INI file anymore.   Unlike in previous versions, **all** entries in the INI file can and should be modified using the Setup Dialog and the other dialogs you can reach from there.   Also, by using the regular method for changing settings you make sure only values that are valid for your setup will be saved and avoid further complications.

Q: What happened to the **Debug Output** from version 1.10?

A: This temporary solution is no longer needed.   All the information you got through the debug output is now available in the Info Dialog and the Effect Panel.

Module Editors

Q: I'd like to edit modules or even create my own ones.   Is there such a program?

A: To create or edit modules you need a module editor, often referred to as **tracker**.   Unfortunately, no such tracker program currently exists for Windows, but there are quite a few for the **DOS environment**.   Although there are many others, the following fine programs are generally considered to be the most useful and sophisticated ones:

Module Editor	Format	chan.	instr.	supp. h/w	Effects
ScreamTracker 3.01	S3M	16	99	SB Pro/GUS	superset of PT
MultiTracker 1.01	MTM	32	31	SB Pro/GUS	PT compliant
Fast Tracker	MOD	8	31	SB/DAC	PT compliant

| Farandole Comp. 1.0 | **FAR** | 16 | 64 | GUS | proprietary |

These editors are all (computer-) keyboard based, that means you use certain keys to represent a note (like Z for C-2 and S for C#2).

If you have access to FTP, you can download them from **ftp.eng.ufl.edu:/pub/msdos/demos/music/programs/trackers**.

About other stuff

Q: It's a great program, but a **volume control** would have been nice.

A: A volume control is not very useful from a technical point of view.   If you would use it to slide the volume down, you would already reduce the output data stream from Mod4Win to the wave driver and therefore increase the signal noise ratio (SNR).   On the other hand, sliding the volume up would most likely cause over-amping as Mod4Win attempts to play at the highest possible volume anyway to maximize the usable dynamics and minimize SNR.

Almost no Multimedia program I could think of has such a volume control.   If you want to adjust the volume you should use the **mixer utility** of your sound card.   Such a mixer ships with virtually every sound card that conforms to the MPC standard and allows you to select and mix different sources as well as adjust the volume, balance, and sound of your card. You can specify this mixer in the Setup Dialog and then easily access it through the Mixer Button.

If you want to adjust the **pre-amplification** level temporarily for a certain module you can use the PreAmp Slider in the Main Dialog.

Q: Unfortunately, at 1024 x 768 or higher, I cannot read most of your buttons very well, and even have difficulty hitting them with the mouse cursor.   I'm hoping future version(s) will have this part of the **user interface** worked out.

A: If you have problems with Mod4Win in this resolution, you should have problems with the rest of your programs too.   The size of the buttons is about the same as the title bar and should therefore be sufficiently large enough to handle.   If you compare the size of our buttons to the ones in the speedbar of popular applications, you'll find that they are not undersized.   Of course in higher resolutions everything will shrink, but that's why they are meant to be run on larger monitors.

The player panel is drawn the same way for all resolutions.   Since it must fit also on a 640 x 480 screen, we cannot make it much bigger and having several differently sized panels for different resolutions doesn't seem to be worth the effort.

Q: My GUS supports **hardware mixing**.   Wouldn't that reduce the processor load by a

significant margin?

A: Yes it would.   The unfortunate part is, that this hardware capability is not part of the approved MCI interface standard and therefore device and hardware dependent.   However, a drop in processor load from 15 % to 1.5 % is certainly something worthwhile trying to accomplish.

As more wavetable synthesizer cards hit the market, I hope there will be a standard MCI device driver interface that allows us to take advantage of any hardware that supports hardware mixing or even loading samples into the cards memory, but for now a special version of Mod4Win that supports only one specific sound card is out of question.

Q: Why do I keep getting **error messages** when I try to load my **list files from version 1.10**?

A: Because of the new support for multiple formats and archives we needed a more powerful list file format that holds the necessary information related to these features.   Sorry, but you'll have to make your list files again.

Q: What about **synthesized instruments** in S3M?

A: Supporting these in Windows is difficult.   The problem is that the S3M format is designed to support synthesized instruments using direct hardware access to an OPL-2 chip.   For sampled instruments we calculate the wave data ahead into a buffer and the wave driver then plays out of this buffer asynchronously while Windows lets you do other things.   The synthesized instruments however, have to be played in real time which requires a totally different approach for the multitasking.   S3M modules with regular sampled instruments are fully supported in this release of Mod4Win.

Q: Anyway, I wanted to express my delight with your marvelous app.   I've tried several **MOD players for Windows**, all with disastrous results.

A: Thanks a lot.   We do the best we can.

For more information about Problems see also the section **Known Problems**.

What is a MOD-File?

A MOD-File is a collection of **sample data** (similar to the WAVE format) and a **description** of how to play these samples (similar to the MIDI format).   The samples in a MOD-File are raw, 8 bit, signed, headerless, linear digital data.   There may be up to **31 distinct samples** in a MOD-File, each with a length of up to 128K (though most are much smaller, about 10K - 60K).   The sequencing information in a MOD-File contains 4 tracks of information describing which, when, for how long, and at what frequency samples should be played.   This means that a MOD-File can have up to 31 distinct sampled sounds, with up to **4 playing simultaneously** at any given point.   This allows a wide variety of orchestrational possibilities.   15 instrument MODs are somewhat older than 31 instrument MODs and are not seen very often anymore.

The samples are called **instruments**, but they don't necessarily have to be samples of real instruments.   It doesn't really matter if the sound of a violin, an exotic oriental instrument, a human voice, or the noise of crushing tomatoes is used as a sample.   The ability to use one's own samples as instruments is a flexibility that other music files/formats do not share, and is one of the reasons MOD-Files are so popular, numerous, and diverse.

The description how to play these samples is divided into so-called Patterns.   Each of these **patterns** contains exactly 64 note lines (divisions), that specify the play pitch and effects for each of the four channels.

Therefore the MOD format reveals a **big advantage** over the WAVE and MIDI format.   Any naturally recorded sound can be used as an instrument (what MIDI is only able to do on sound boards with wave table lookup and a special synthesizer chip like the Yamaha OPL-4).   Moreover these sounds can be played in any desired order and with several effects (what MIDI can't do at all).   This way, the amount of data is reduced to a fraction compared to a WAVE file that produces the same sound.

Of course, there are also some important **disadvantages**!   If played on regular sound boards with one or two channels, MOD-Files clink (Why is that?).   Samples are stored with only 8 bit resolution in the file, and the maximum possible sample frequency for a sample in a MOD-File is about 32 kHz., which makes CD quality impossible (that's no problem for WAVE and MIDI files).

Another disadvantage is that the samples are only mono and the MOD-Player has to distribute them (somewhat arbitrarily) between left and right.   Therefore listening to a bass drum through head phones can become a cruel experience, since our ear is used to receive low frequencies from all directions and not only in one ear.   This problem has been resolved in two different ways.   The traditional ProTracker format was extended to support Panning and for those modules that don't, you can play them with Surround Sound.   Both methods greatly improve stereo playback to overcome this historic limitation.

Besides the regular ProTracker format described above, the dramatic evolution of sound cards

and processor power for the PC has produced **many more powerful formats** in the last years. There are modules now with up to 32 simultaneous channels, a maximum of 255 instruments, possible sample rates of up to 48 kHz, and 16 bit source samples of (almost) unlimited size. Many of these <u>Formats</u> are now supported in Mod4Win and others will be supported in the future.

Why do MOD-Files clink (no more)?

Summary of the following paragraphs:

> The **sound card produces harmonics** like crazy and the average PC is too slow or doesn't have enough memory to implement a digital filter that filters them back out.   The solution here would be a Pentium VLB with 16 MB RAM or better, but who has such a machine?

Now it's getting a little theoretical...

The MOD-Format originally comes from the **Commodore Amiga**, that features a relatively intelligent sound chip, the PAULA.   This chip can play samples on four channels with different pitches (sample rates) and volumes at the same time.   That's why it is relatively simple to pass the PAULA a new pitch or volume value, or a new sample now and then, therefore an **Amiga** MOD-Player uses a minimal amount of CPU power and plays almost by itself.

On a PC however we mostly deal with relatively **dumb sound cards**, that feature only one or two channels, which even have to work at the same sample rate.   Therefore we are forced to mix the samples from the MOD-Files together at a new sample rate.   That means sampling up or down, or to put it this way: we have to skip over some bytes, pack the rest together with other skipped bytes and pass the resulting pulp to the sound card.   Further complicating this is the missing volume control, which causes an immense loss of quality at low volumes.   These problems can only be compensated by 16 bit sampling.   In short, on a PC we are forced to calculate some pulp, put it in relation to the volume and mix this all together.   That takes time!

The big problem with sampling is the art of playing a noise back just as it was recorded and as memory efficient as possible.   But because the original can only be sampled with a certain frequency, it is not useful to record bird chirps with a sample rate of 1 kHz for instance, because the chirps contain frequencies of up to 20 kHz and higher and you would only record an arbitrary sequence of something.   In short, the signal has to be recorded to the memory in a way that it is reproducible, that means the original signal has to be modified in a way that the highest frequency in this signal is lower than half the sample frequency of the sound card.   This is called the **sampling theorem**.   If this is not obeyed, it is very likely that the signal is not reproducible or in other words, it doesn't sound good.

The same problem exists for reproducing the signal with Digital-Analog Converters (DAC).   Because it doesn't know what to do between two bytes (or words) of a sample and simply holds the last output value constant until the next input arrives, it transforms our nice smooth input to rectangles.   The result is the creation of **unwanted frequencies** that can be very high and disturbing and annoying to the ear.   They are called **harmonics**.   Harmonics can be filtered out from the signal with a low pass (Oversampling and Filtering), but that's a different problem!   For more information about filters see Further projects!

The sound cards in our PCs often have these kinds of filters integrated, but they are not intelligent enough to remove these harmonics and can't be expected to be either.   Considering

the fact that in a <u>MOD</u>-File, samples with different sample rates (up to a ratio of 1:8) have to be mixed together over one channel to the sample rate of the sound card, which filter frequency is the sound card supposed to use?   So the DAC doesn't produce harmonics intentionally, but the MOD-Player passes these **rectangular deformed waves**, that contain harmonics below the filter frequency of the sound card to it, and that clinks!

The only solution for that problem would be the implementation of a **digital filter** in the MOD-Player that has a variable filter frequency, but using this filter takes either memory or computing power to an extent that is not usual in today's PCs.

With the release of version 2.10 we introduced a revolutionary technique we call IDO™ which stands for **Interpolated Dynamic Oversampling**.   With IDO, harmonics introduced by the mixing routine are greatly reduced.   Instead of using the last value of a sample, IDO calculates an estimate of the missing value.   This method somewhat smoothes out the rectangular shaped output curve produced by sampling without IDO.   Because of the immense number of calculations, IDO will use large amounts of CPU power when enabled.   But if you have the spare power, you will be reimbursed with a **much more enjoyable listening experience**.   A large portion of the clinking will be unnoticeable to the human ear.   IDO doesn't relinquish the necessity of digital filters, but it makes them less essential and is another step towards the perfect reproduction of digital music modules.

Where to get more MOD-Files?

MOD-Files are widely available in a variety of musical styles.   Most of them are freeware or shareware, so you pay only for the distribution.   Mod4Win comes with a number of sample MODs, but of course you'll want to accumulate and play your own collection of favorite MODs.

You can get MOD-Files from

     many local BBS's,
     various on-line services,
     many Anonymous FTP Sites,
     from shareware dealers, and
     recently on a number of CD-ROMs.

There is even a monthly MOD-Chart by Oliver Bellmann.

Anonymous FTP Sites that carry MODs

This is only a small selection of anonymous FTP sites that carry MOD-Files:

Country	FTP server	Directory
USA	wuarchive.wustl.edu	/systems/amiga/audio/music
	ftp.uwp.edu	/pub/music/sounds/mods
UNITED KINGDOM	ftp.brad.ac.uk	/misc/mods/
FINLAND	ftp.funet.fi	/pub/amiga/audio/modules
GERMANY	ftp.uni-muenster.de	/pub/sounds
	ftp.uni-oldenburg.de	/pub/amiga/incoming/mods
AUSTRALIA	archie.au	/micros/amiga/incoming/ mods
FRANCE	geocub.greco-prog.fr	/pub/incoming/amiga/mods
SWEDEN	ftp.luth.se	/pub/OS/amiga/mods

CD-ROMs with MOD-Files

If you have a CD drive connected to your computer, CD-ROMs are the easiest, most convenient, and cheapest way to gather a large collection of MOD-Files.

From the various CD-ROMs that contain MOD-Files, the one I've heard of (and got sample copies of some) are:

10,000 Sounds & Songs
Mystical MOD Madness
Town of Tunes
Sound Site CD-ROM
The Ultimate MOD Collection

The Digital Data Archives

"10,000 Sounds & Songs"
*   Volume 0 of the Digital Data Archives
*   this CD contains 850 selected MODs
*   also countless other Multimedia files (.wav, .mid, .avi, .fli, .voc, .sam, and much more)
*   price: $40

"Mystical MOD Madness"
*   Volume 1 of the Digital Data Archives
*   available soon
*   will contain about 3,000 MODs, S3Ms, and 669's

For more information or to order contact

    Walt Perko
    P.O. Box 640608
    San Francisco, CA. 94164-0608
    phone: (415) 771-1788
    e-mail: wperko@netcom.com

Town of Tunes CD

* a compilation of the best 820 MOD music and melody files
* it takes about 70 hours to hear them all
* carefully picked from approx. 4000 files worldwide in a two year period
* includes 21 of the newest and hottest tunes from 'THE PARTY' in Denmark Winter 1994
* also some of the newest S3M music/melody files, 100 MB of the latest spectacular VGA graphic demos, and more
* price: $35 + $6 s/h

To my knowledge this CD is only available as an import from Denmark at this point.   For more information or to order contact

Wichman Consult
Hovmålvej 78-6
2300 Copenhagen S., Denmark
phone: +45-3151-3187
Fax: +45-3122-2744
e-mail: ecjowh@hp3.cbs.dk

Sound Site CD-ROM

*   large collection of music files taken from the Saffron archives
*   including over 1350 MOD files
*   nearly 500 MIDI files, and also 669, STM, and other files
*   price: $19.95 + $5 s/h

For more information or to order contact

    Island CD Creations
    1960 Kapiolani Blvd. Suite 113-592
    Honolulu, HI 96826
    e-mail: duane@shell.portal.com (Duane Takamine)

The Ultimate MOD Collection

* contains more than 1,700 MODs
* a bunch of players & utilities (editors, etc.) for all sorts of computers
* some 669, STM, MED, and other file formats
* price: $29

For more information contact

    The Marketplace
    phone: (800) 289-1766 or (314) 521-4862

Oliver Bellmann's MOD-Charts

MODCHARTS is a compilation of the one hundred best MODs of the month. This Top-100 appears every month and is available all around the world.   All you need is your computer, a modem, and Mod4Win to play these songs.

You can download these MODs from various Anonymous FTP Sites and local BBS's.   Normally, there are 14 MODs, the places 1 through 10 plus four newcomers.

If you need more information about MODCHARTS contact

> Oliver Bellmann
> (a.k.a. HITMAN on IRC, #modcharts)
> e-mail: oliver@math.uni-muenster.de

What the Hell are Patterns?

A pattern can be seen as a **sheet of music**, in which 64 notes are stored for each channel.   Because the regular MOD-Format supports 4 channels, that would come up to 256 notes plus information about effects and the instrument to play for each note.   A MOD-File holds up to 128 patterns.   At regular Speed, that translates to about 16 minutes play time.   But who can stand that much MOD at a time?

How to use Hotkeys with Mod4Win

The program is ready to receive bashes from the user under any circumstances.   To give you an idea what you are punching, we give you the complete hotkey overview here:

       Main Dialog
       Setup Dialog
       Open Dialog
       Info Dialog

If you have No Idea at all, you might want to start with this.

Hotkeys Main Dialog:

Key	Action
ESCAPE	Stop
SPACE	Play
P	Pause
CURSOR UP	Previous Song
CURSOR DOWN	Next Song
CURSOR LEFT	Rewind
CURSOR RIGHT	Fast Forward
HOME	First Song
END	Last Song
O	Open
L	Quick Selection Box
F	File Menu
I	Info
E	Effect Panel
T	Time Display Mode
PAGE UP	Display File Name
PAGE DOWN	Display Song Name
M	External Mixer
S	Setup
F1	Help
F2	Shuffle
F3	Repeat
F4	Introscan
F5	Copy
F6	Move/Rename
F7	Remove From Playlist
F8	Delete
F9	Toggle Quality Mode
F10	Toggle BPM Speeds
F11	Toggle Surround
F12	Toggle IDO
INSERT	Toggle Panning
NUMPAD DIVIDE	Decrease PreAmp
NUMPAD MULTIPLY	Increase PreAmp
A	About

You can change all of these hotkeys using the Hotkey Editor Dialog.

see also:

Main Dialog

Setup Dialog Hotkeys
Open Dialog Hotkeys
Info Dialog Hotkeys

Hotkeys Setup Dialog:

Key	Normal	Control	Shift	Control-Shift
F1	Help			
LEFT, RIGHT	Wave Driver			
UP, DOWN	Sample Rate	8/16 Bit	Mono/Stereo	Buffers
ENTER	OK			
S	Save			
ESCAPE	Quit			

see also:

Setup Dialog

Main Dialog Hotkeys
Open Dialog Hotkeys
Info Dialog Hotkeys

Hotkeys Open-Dialog:

For general use:

Key	Normal	Control
F1	Help	
CURSOR LEFT/RIGHT	Add/Delete	Add All/Delete All
ENTER		OK
S		Save
ESCAPE	Quit	
ALT-F	Set focus to Filelist	
ALT-D	Set focus to Directory List	
ALT-P	Set focus to Playlist	
ALT-F1	Selection Edit Field for Filelist	
ALT-F2 + Drive Letter	Change current drive	
ALT-F3	Selection Edit Field for Playlist	

For use in Filelist/Playlist:

Key	Action
INSERT	Select Entry
DELETE	Deselect Entry
NUMPAD PLUS	Select Entries
NUMPAD MINUS	Deselect Entries
NUMPAD MULTIPLY	Invert Selections
F5	Add/Delete Selections

For use in Directory List:

Key	Action
CTRL-PAGE UP	One directory up
CTRL-PAGE DOWN	One directory down
CTRL-BACKSLASH	Root directory
F5	Load whole drive/directory/archive/list file

see also:

Open Dialog

Main Dialog Hotkeys
Setup Dialog Hotkeys
Info Dialog Hotkeys

Hotkeys Info-Dialog and Instrument Info Dialog:

Key	Action
F1	Help
NUMPAD PLUS	Scroll Instrument List Up
NUMPAD MINUS	Scroll Instrument List Down
CTRL-NUMPAD PLUS	Next Instrument
CTRL-NUMPAD MINUS	Previous Instrument
1..9	Instrument Number
SHIFT-CURSOR UP/DOWN/LEFT/RIGHT	Scroll Detail Window
ESCAPE	OK

You can change these hotkeys using the Hotkey Editor Dialog.

see also:

Info Dialog
Instrument Info Dialog

Main Dialog Hotkeys
Setup Dialog Hotkeys
Open Dialog Hotkeys

How to use the Dialogs in Mod4Win

To make life for the user of our program a little easier (and save his/her last nerves for more important daily tasks) we put everything you could possibly adjust, switch or change in these little dialogs:

Main Dialog
Setup Dialog
Open Dialog
Info Dialog
Effect Panel

If you're new to Mod4Win and have No Idea how to use it, you might want to start here.

Main Dialog

Use the mouse to click at the area you'd like to learn more about!
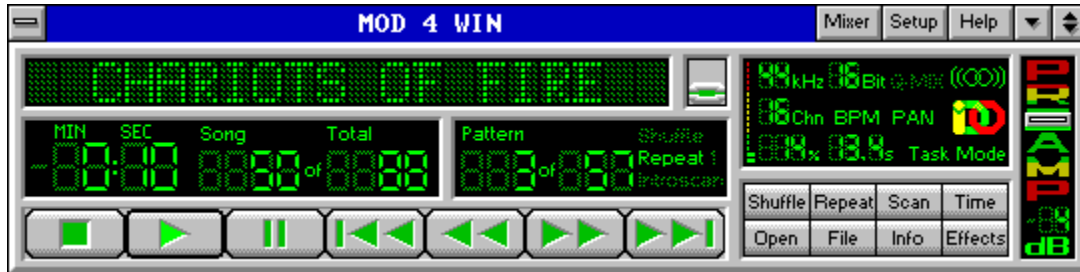
If you double click on any non-active element, this dialog will be replaced with the About Dialog.   To switch to the Mini Status, choose **Restore** from the system menu or double click the window caption.

see also:

      Main Dialog Hotkeys

      Setup Dialog
      Open Dialog
      Info Dialog
      Effect Panel

[About](#)

switches from the Main Dialog to the <u>About Dialog</u>.

Mixer

launches the external mixer.   You must select a mixer in the
Setup Dialog first to use this feature.

Setup

opens the Setup Dialog.   You can use this dialog to adjust all important settings related to Mod4Win.

Help

shows this <u>H</u>elp file.

The help file is the document you're just desperately looking for help in!

Switch to Mini Status

The Main Dialog of Mod4Win can also be displayed in a so-called <u>Mini Status</u>.   This will reduce the amount of visible controls to the absolute minimum.   Use this mode if you have Mod4Win running in the background, yet still would like to know what's going on.

Info Window

shows the file name or the song name of the currently playing module.   Use the Name Switch to toggle between the two. The file name will be preceded by the word '**PACKED:** ' or '**UNPACK:** ' respectively, if you're playing a module out of an archive.

If you click into this window, a Quick Selection Box will be launched.

For more information about the current module use the Info Button to launch the Info Dialog.

The file name of a MOD-File is mostly different from the name of the song it contains.

Quick Selection Box

opens a <u>Quick Selection Box</u>.   Use this dialog to quickly select a module you'd like to hear next.

Name Switch

toggles between displaying either the file name or the song name of the currently playing module in the <u>Info Window</u>.

Time Display

displays the <u>Rest Time</u> or the elapsed time in the currently playing module in minutes and seconds.   You can toggle the display mode using the <u>Time</u> button.

Rest Time

The rest time display shows the remaining time in the currently playing module.   Rest time display is marked by a trailing minus sign.

[Song](#)

This is the number of the song in the playlist that is currently playing or will be played next if no song is playing.

Song Count

displays the number of songs in the actual playlist.

Pattern

displays the current Pattern in the song.

Pattern Count

displays the number of <u>Patterns</u> in the current song.

Shuffle Play

if highlighted signals that Mod4Win plays in <u>Shuffle Mode</u>.

Shuffle Mode

In shuffle mode the titles from the playlist will be played in random order.

Repeat/Repeat One

if highlighted signals that Mod4Win plays in <u>Repeat</u>/Repeat one mode.

Repeat One

if highlighted signals that Mod4Win plays in Repeat One Mode.

Repeat Mode

In repeat mode the whole playlist will be repeated continuously.
In repeat one mode the current song will be repeated continuously.

Introscan

if highlighted signals that Mod4Win plays in <u>Introscan Mode</u>.

Introscan Mode

In Introscan mode each song plays for 15 seconds, then the next song will be loaded and so on...

Introscan mode is also marked by a flashing <u>PLAY</u> button.

STOP

stops the currently playing song.

PLAY

starts playing the current song in the playlist if one exists.

PAUSE

pauses PLAY until PAUSE or PLAY is pushed again.

PREVIOUS SONG

plays the song that immediately precedes the current song in the playlist if one exists.

If you click this button during playback of a song, it will rewind to the beginning of the song.   To go to the previous song click it again.

REWIND

rewinds within the currently playing song.   If the beginning of the song is reached, Mod4Win will automatically jump to the previous song in the playlist if one exists.

FAST FORWARD

fast forwards within the currently playing song.   If the end of the song is reached, Mod4Win will automatically jump to the next song in the playlist if one exists.

NEXT SONG

plays the song that follows immediately after the current song in the playlist if one exists.

Sample Rate

shows the Sample Rate, the wave driver currently plays at.

The highest play back quality for MOD-Files is already achieved with a sample rate of 32 kHz!   Other MOD-Formats however may profit from a higher sample rate.

See also: Problems

Bits per Sample

shows the actual Sample Depth.

16 bit sampling should only be used with at least 8 MB RAM!

See also: System Requirements and Problems

Q-Mix

shows whether Quality Mixing Mode is currently used.   This is only relevant for 8 bit sampling.

You can temporarily toggle Q-Mix mode by simply clicking this field or with the appropriate Hotkey.

Mono/Stereo/Surround Sound

signals <u>Mono</u>, <u>Stereo</u>, or <u>Surround</u> play mode.

If you listen with head phones you should stick with mono or use surround!

See also: <u>What is a MOD-File?</u>

You can temporarily toggle Surround Sound by simply clicking this field or with the appropriate <u>Hotkey</u>.

Number of Channels in Module

shows how many channels can play parallel at maximum in the current module.   This number is fixed for some MOD-Formats and variable for others.   It doesn't say anything about how many channels are actually playing.

BPM Speed Enabled

This option selects whether the Set Speed effect will be interpreted as a speed (ticks/division) or as a tempo (BPM) setting for values greater or equal 32.

You can temporarily toggle BPM Speed by simply clicking this field or with the appropriate Hotkey.

This option should always be enabled.   There's only a very small number of modules that don't play correctly with BPM speed enabled.   Among these are the famous classic **"Klisje paa klisje"** and several modules from **Jogeir Liljedahl**.   Play them with this option disabled.

Panning Enabled

shows whether <u>Panning</u> is currently enabled.

You can temporarily toggle Panning by simply clicking this field or with the appropriate <u>Hotkey</u>.

[IDO](#)

shows whether Interpolated Dynamic Oversampling ([IDO](#)) is currently enabled.

You can temporarily toggle IDO by simply clicking this field or with the appropriate [Hotkey](#).

CPU Usage

shows the actual CPU utilization in percent and should be considerably lower than 100.

The colored bar gives a quick optical estimate of how much Mod4Win utilizes your system.   In the green range there will be a minimal load on the system.   In the yellow range the load increases and multitasking will become less responsive.   In the red range Mod4Win puts a very high load on your system and you should think about changing the sampling parameters.

CPU utilization is the portion of time that Mod4Win needs to calculate the song in relation to the time it takes to play what was calculated at the current sample rate.

See also: System Requirements

Buffer Time

shows the time left that Mod4Win can continue playing if it doesn't get any CPU time anymore.   This is important when another application occupies the CPU for itself, for instance when loading applications, loading files, saving data, or such.

Timer Mode Display

shows which Timer Mode Mod4Win is currently using to multitask with other Windows and non-Windows applications.

There are three possible timer modes:
* Windows Timer
* MM Task
* Interrupt

Shuffle Play

switches the <u>Shuffle Mode</u> on and off.

Repeat

toggles between Repeat/Repeat one/Repeat none modes.

Introscan Play

switches the <u>Introscan Mode</u> on and off.

Time Display Mode

toggles the <u>Time Display</u> between <u>Rest Time</u> and elapsed time.
The display can be toggled only if a module is loaded.

Open

opens the Open Dialog.   Use this dialog to load modules and create and save playlists.

File Menu Button

This button opens the File Menu.

File Menu

From this sub-menu you can <u>Copy</u>, <u>Move/Rename</u>, or <u>Delete</u> the current module.   You can also <u>Remove</u> it from the playlist without deleting it from your drive.

Copy

This item will open a <u>File Manager Dialog</u> to let you copy the current module.

The File Manager Dialog will let you specify the target drive/directory/name.

Move/Rename

This item will open a <u>File Manager Dialog</u> to let you move/rename the current module.

The File Manager Dialog will let you specify the target drive/directory/name.

Remove Module From Playlist

This item will let you remove the current module from the playlist.   The module will not be deleted from your drive.

A message box will come up to prompt you whether you really want to remove the current module from the playlist.

[Delete](#)

This item will let you delete the current module.

A message box will come up to prompt you whether you really want to delete the current module.

Info Button

enables or disables displaying the <u>Info Dialog</u>.   Use this
button to show details about the currently playing module and
the instruments contained in it.

Effect Button

enables or disables displaying the Effect Panel. Use this button to show details about the effects in the currently playing module.

PreAmp Slider

This slide bar lets you adjust the correct amount of <u>Pre-Amplification</u> for the current module.

A default amount of pre-amplification is applied if you enable PreAmp with the PA switch in the Setup Dialog.   This "optimal" value corresponds to 0 dB.   You can change this value in steps of 1 dB, the total selectable range being +/- 20 dB.   An increase of 6 dB will double the perceived loudness and vice versa.   Use the mouse to drag the slider to the desired position or use the appropriate <u>Hotkey</u> to adjust the value.

<u>Note</u>: This slider can still be used, even if PreAmp was disabled in the Setup Dialog.   The 0 dB position then corresponds to a totally linear amplification.

About Dialog

The About Dialog shows which version and release number of Mod4Win you're running, whether this copy is shareware or registered and to whom it is licensed, the legal copyright of Mod4Win, and gives credits to those who deserve it.

To close the About Dialog and return to the Main Dialog, double click again or hit any key.

Mini Status

Use the mouse to click at the area you'd like to learn more about!

This dialog is a miniature version of the <u>Main Dialog</u>.   It shows only a minimal amount of controls and occupies only a small fraction of the space on your desktop.   You can have this dialog float on top of all other applications if you check the **Always on Top** item in the system menu.   To toggle the <u>Info Dialog</u> and <u>Effect Panel</u> on and off, click with your mouse in the Info Window using the left and right mouse button respectively.   To return to the Main Dialog choose **Maximize** from the system menu or double click the window caption.

see also:

<u>Main Dialog Hotkeys</u>

<u>Setup Dialog</u>
<u>Open Dialog</u>

File Name/Song Name

shows the file name or the song name of the currently playing module, depending on the position of the <u>Name Switch</u> in the <u>Main Dialog</u>.   The file name will be preceded by the word **'PACKED:** ' or **'UNPACK:** ' respectively, if you're playing a module out of an archive.

The file name of a MOD-File is mostly different from the name of the song it contains.

Time Display

displays the Rest Time or the elapsed time in the currently playing module in minutes and seconds.   You can toggle the display mode using the Time button in the Main Dialog.

[Song](#)

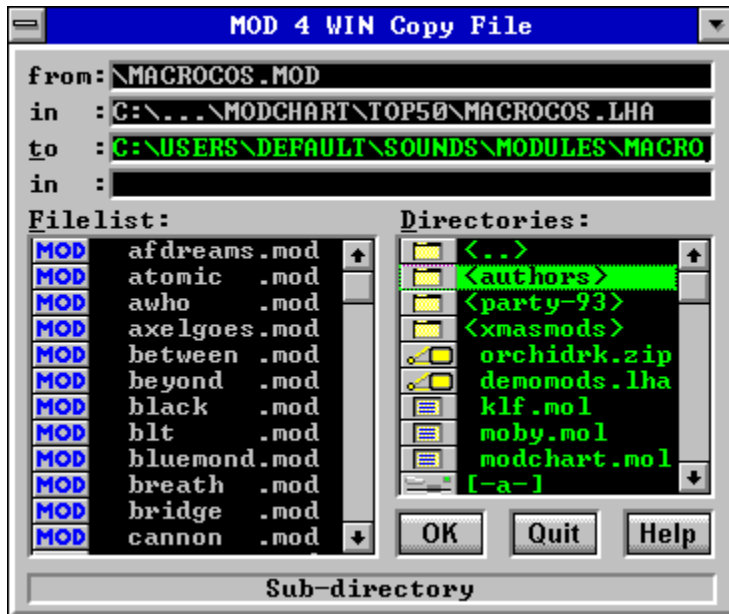This is the number of the song in the playlist that is currently playing or will be played next if no song is playing.

Leave Mini Status

Click here to return to the regular <u>Main Dialog</u> of Mod4Win.

File Manager Dialog

Use the mouse to click at the area you'd like to learn more about!

This dialog will appear after you chose <u>Copy</u>, or <u>Move/Rename</u> from the <u>Main Dialog</u>.

Filelist of the Current Directory

This list shows the filenames of all modules in the current directory.

Only files with one of the extensions **.mod**, **.nst**, **.wow**, **.okt**, **.stm**, **.s3m**, **.669**, **.far**, and **.mtm** (these are the file types Mod4Win can handle) are displayed.   The type of the module is indicated by a little icon left from the filename.

Directory List

This list shows all drives, archives, module lists, and sub-directories in the current directory.   To view an entry in the Filelist, simply drag and drop it there with the mouse or hit ENTER.

Archives, module lists, sub-directories, and the different types of drives are all symbolized by unique icons to the left of the entry.

Status Line

This line gives a brief description of the active element in the dialog.

OK

Hitting OK will start to copy or move/rename the specified file.

Quit

Hitting Quit will close the File Manager Dialog and return to Mod4Win without copying or moving the specified file.

Module Name

shows the complete path and file name of the source file.

Archive Name

If the source file is contained in an archive, this field will show
the complete path and file name of the archive.

Target Directory and/or File Name

shows the complete path and file name of the destination file. You can edit this field to change the default path and/or file name.

Restriction:
You always have to specify a drive letter first.   If the last character in this field is a back slash ("\"), the preceding element will be interpreted as a directory.   In this case the file name will be the Original File Name.

Archive or List Name

If you want to copy/move a file into an archive, this field will show the complete path and file name of the archive.
Similarly, if you want to copy a module into an module list, this field will show the complete path and file name of the list file.

Restriction:
You can only select an archive or a filelist as destination if they already exist.   You cannot create either one with this dialog.

Quick Selection Box

Use the mouse to click at the area you'd like to learn more about!

```
 1:12ftgrve.s3m
 2:50000mhz.s3m
 3:after   .mod
 4:collapse.s3m
 5:disco   .s3m
 6:kh-evol .s3m
 7:night2  .s3m
 8:slfinsol.s3m
 9:techno1 .s3m
10:wicked  .s3m
11:awake   .s3m
12:mc-outof.s3m
13:flashbak.mtm
```

none	name	ext

This dialog will appear when you click at the <u>Info Window</u> in the <u>Main Dialog</u>.   To close this dialog double click any of the modules in the list or click anywhere with your right mouse button or simply hit ESCAPE.

Selected Module

The highlighted module will be the next one to play when you double click it or hit ENTER.

Selection List

This list displays the file names of all modules currently in your Playlist.   Click any one of them to select it or double click to load this module immediately.

You can also use the keyboard to select a module.   Simply hit the first letter of the module's name and the Selection will cycle through all those that start with this letter.
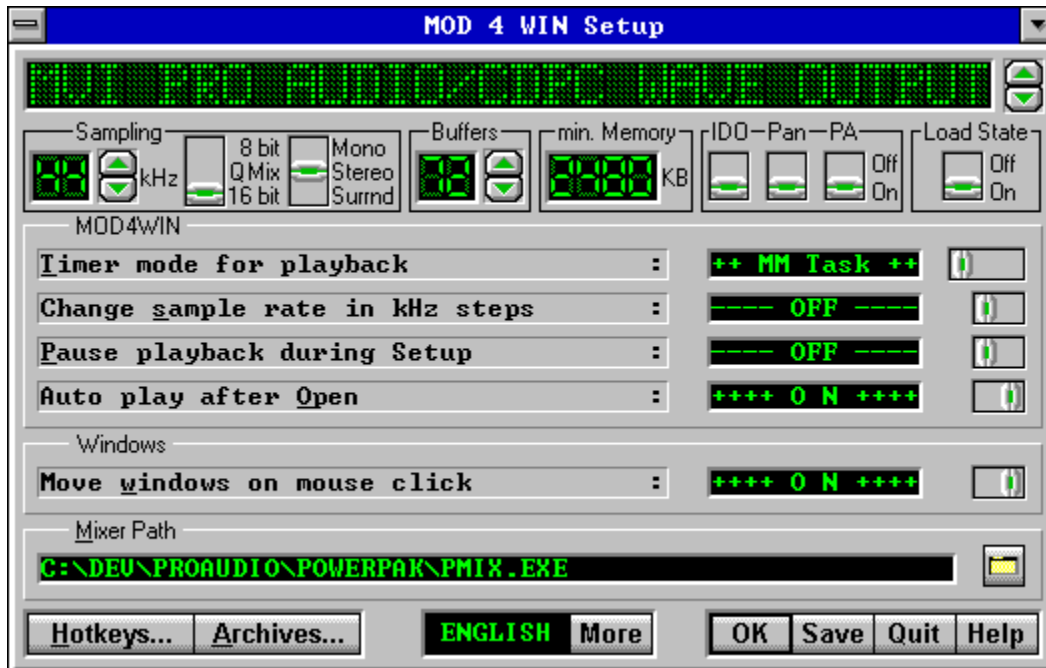
Sort Buttons

These buttons let you sort the <u>Selection List</u> in one of three ways: unsorted, sorted by name, or sorted by extension.

If you sort by name or extension the first letters of all names or extensions will be capitalized respectively.

Setup Dialog

Use the mouse to click at the area you'd like to learn more about!

The Setup Dialog will let you specify and safe all settings in Mod4Win.   From here you can also launch the Archive Options Dialog and the Hotkey Editor Dialog.

see also:

      Setup Dialog Hotkeys

      Main Dialog
      Open Dialog
      Info Dialog
      Effect Panel

Wave Device Name

shows the name of the selected wave driver.

Use the Wave Driver Button to change the wave device driver.

Note: You must install your wave device drivers with the Drivers applet in the Windows Control Panel first before Mod4Win will let you select them.

Wave Driver Button

selects the wave driver used for sound output.

Note: Do not to use the PC speaker driver as an output device.   For more information about the speaker driver see also the section Frequently asked Questions (FAQ).

Sample Rate

displays the current sample rate.   Higher sample rates yield better sound quality, but also require more CPU power.   For instance 32 kHz means that Mod4Win has to calculate 32,000 samples per second.

On better sound boards Mod4Win is able to sample with up to 48 kHz, however 32 kHz are practically sufficient, since this is the highest frequency of any sample recorded in a regular MOD-File and therefore also the highest quality.   Other Module Formats however may benefit from a higher sample rate.

For comparison we show here the data of some digital devices:
  DAT-Recorder : 32 - 48 kHz
  CD-Player   :   44 kHz
  DSR-Tuner   : 32 - 44 kHz

Use the Sample Rate Button to change the current sample rate.

Sample Rate Button

allows you to adjust the current Sample Rate.

For more information about sample rate see also the section Frequently asked Questions (FAQ).

Sample Depth

determines the resolution of the sampled output.   It is preferable to select 16 bit output if you have enough memory at your disposal.   Otherwise you can choose between regular and Quality Mixing in 8 bit mode.

For regular 4-channel MODs there is not much of an audible difference between 8- and 16-bit playback, because the mixing only yields 9 or 10 bit output anyway.   However, as the number of channels increases, the advantage of 16 bit playback becomes more prevalent.

See also: Bits per Sample

8 Bit Quality Mixing Mode

If you use 8 Bit Sampling, you can choose between regular and quality mixing mode.

In quality mixing mode, Mod4Win will mix like the version 1.x, that is mix into a 16 bit buffer and then reduce to 8 bit, while in regular mixing mode the mixing will be done into an 8 bit buffer.   Quality mixing is especially useful for modules with many Channels because then the errors in regular mixing will add up to degrade the sound quality dramatically.

Note: Using this option will increase the CPU Usage in your system.   Use this option if you have an 8 bit sound card and don't mind a little higher CPU Utilization.

Mono/Stereo/Surround Switch

toggles the output between mono and stereo.   In stereo mode
you can also choose Surround Sound.

See also: Mono/Stereo/Surround Sound

Surround Sound

If you use <u>Stereo</u> mode, you can also enable surround sound.

The original <u>MOD</u>-Format was designed to play each channel either only left or right.   (The good old AMIGA couldn't do any better.)   This is not a very pleasant listening experience, especially with head phones.   Using surround sound, each channel will be mixed into both, left and right output, delaying one side to produce a more realistic sound.

<u>Note</u>: Using this option will increase the <u>CPU Usage</u> in your system. Also, modules that use the <u>Panning</u> command may sound better with this option turned off.

Output Buffers

shows the number of buffers Mod4Win uses to temporarily store the sample output.   One buffer is enough to play for 200 milliseconds.

Buffers are necessary, because under Windows™ it is uncertain when a task will get access to the CPU again.   Therefore we have to calculate a certain amount of output in advance that can then be played.

Use the Output Buffers Button to change the number of buffers.

Output Buffers Button

selects the number of Output Buffers.   You can select any number between 2 and 99, that means buffering between 0.4 and 19.8 sec of sound.

Note: More buffers will increase the amount of Memory needed by Mod4Win, however, in some Timer Modes this will also enhance the multitasking behavior of Mod4Win.

For more information about buffers see also the section Frequently asked Questions (FAQ).

Minimal Memory

shows the memory in KBytes that is occupied by the selected number of Buffers.

For the total amount of memory used you also have to consider the size of **mod4win.exe**, **player32.dll**, the MOD-File that's playing, the system files of Windows™, and other applications that are running.

For more information about how to optimize memory requirements and sound quality see also the section Frequently asked Questions (FAQ).

IDO

sets the default for IDO™.

Interpolated Dynamic Oversampling (IDO) is a method to interpolate samples such that <u>Harmonics</u> introduced through the mixing routine are greatly reduced and the resulting sound quality is considerably enhanced. Using this method you can achieve much better sound quality, comparable to audio devices that use hardware mixing.

On the downside, IDO requires large amounts of CPU power, your <u>CPU Utilization</u> may double when using this feature.

You can also toggle IDO temporarily from within the <u>Main Dialog</u>.

Panning

sets the default for panning.

Panning enabled means that a channel can be mixed into the left and the right output simultaneously with different volumes to create the impression of the instrument sitting somewhere between the speakers.   This requires more CPU Time because a panned channel needs to be mixed twice, demanding more computations.   If you're short of CPU power you can switch panning off and gain some percent.

You can also toggle panning temporarily from within the Main Dialog.

PreAmp

sets the default for using pre-amplification.

Pre-amplification is necessary, because without it high-channel modules appear to sound quieter than modules with less channels.   This is simply due to the fact that the chance of all channels operating near full amplitude decreases with the number of channels.   Therefore, the higher the number of channels, the more the module needs to be pre-amplified to achieve a somewhat balanced impression in loudness when listening.

Unfortunately, pre-amplification has a downside too: under certain circumstances pre-amplification could be too high and cause over-amping in the module.   This is the case when you recognize a scratching sound that disappears when you disable pre-amplification.

This switch is meaningless for **S3M** modules, because they have an internal variable that sets the correct pre-amplification.

You can also adjust the value of pre-amplification during playback from within the Main Dialog using the PreAmp Slider.

Load State Switch

Having the Load State option enabled, Mod4Win will save its complete internal state when you close it and continue at exactly the same position the next time you open it.

The following settings will be saved with this option:
* Playlist
* current module
* current position in the module
* Name Switch Position
* Time Display Mode
* Shuffle, Repeat, and Introscan Mode

Note: The settings saved with the Load State Switch have nothing to do with the settings saved during the Setup Dialog.

Timer Mode

Because Windows is a non-preemptive multitasking system, Mod4Win has to cooperate with the other applications in some way to allow for a fair sharing of CPU time.   Because there has a compromise to be made, we offer you several settings to choose the one that fits your needs best:

There are three possible timer modes:
* Windows Timer
* MM Task
* Interrupt

Every of these Timer Modes has advantages and disadvantages.   What's best for you depends on your machine and your working habits.   But don't worry, experiment with the settings a little bit, and you'll find out what's best.   You can change this setting at any time, even during playback of a song.

Windows Timer

In this mode, Mod4Win will be sent a timer message from Windows in fixed intervals of time.

When such a message arrives, Mod4Win gets control of the CPU, fills one buffer, and returns control to Windows.   This mode is the most stable and reliable one and the default setting.   The drawback however is, that under certain circumstances, such as when an application occupies the CPU for a long time without returning control to Windows (you will see an hour glass then), or when a non-Windows application (DOS task) runs in full screen mode, Windows can't send the timer message, because it doesn't have control of the CPU.   In this case, Mod4Win will continue to play as long as the buffers last, then however the playback will stop.

Multimedia Task

In this mode, Mod4Win is assigned its own, preemptively controlled task from Windows.

A minimal application is running in the background that gives Mod4Win all its CPU time.   This mode allows for a very fair sharing of resources and good multitasking behavior, because Windows splits the CPU equally between Mod4Win, DOS tasks (if any), and all other Windows applications.   However, Task Mode will not work if an application doesn't free the CPU for a long time (hour glass) or other applications are too CPU-intensive and don't give the Multimedia Task enough time, as it happens with full screen DOS applications.

[Interrupt](#)

In this mode, Mod4Win will be activated through a hardware interrupt.

This interrupt comes always, even when no timer message would be sent. In this mode Mod4Win will always play, no matter what.   The problem here is that once Mod4Win got control through an interrupt, it will take as much CPU time as it needs.   This can be very dragging on your other applications, especially when a new song is loaded and Mod4Win tries to fill the buffers as quickly as possible.   This mode is comfortable to work with if you have lots of CPU power in your machine and like to run non-Windows applications full screen.

<u>Note</u>: On a slow machine this mode could be dangerous, because during the interrupt that Mod4Win uses to do its calculations, other interrupts may occur and influence the stability of the complicated and sensitive Windows operating system which might lead to a Protection Fault Error or even a total system crash.

Change Sample Rate in kHz Steps

This setting determines how to the Sample Rate is changed using the Sample Rate Button.

Some sound drivers (like the one for the PAS 16) report being able to play any sample rate from 11 to 48 kHz.   Most others will report to support only the Windows specific (standard) sample rates 11025, 22050, and 44100 Hz.   At the default setting (**OFF**) Mod4Win will let you select only those sample rates the wave driver reports of being able to play.   However, some of the drivers that claim to support only the standard rates are able to play many others (like the driver for the AudioTrix Pro).   If you're convinced your driver is able to handle other rates, but Mod4Win doesn't let you select them, you can change the default setting (to **ON**), and Mod4Win will then allow you to select any sample rate in steps of 1 kHz.

Caution: Some wave drivers (like the one for the Gravis Ultrasound) will cause protection faults when you force them to other than the standard sample rates.   Use this option on your own risk!

Pause Playback during Setup

This setting determines whether Mod4Win will continue playback when you open the Setup Dialog or not.

Because of the incompatibility problems with wave drivers, Mod4Win defaults (**ON** position) to pause any playing song when the Setup Dialog is opened.   During this dialog the wave driver is asked if it can handle certain settings.   Some wave drivers then immediately change their settings to these values, whether we want them or not.   Mod4Win however will continue to calculate the sound at the old settings and produce very unpleasant distortions.   Unfortunately there is no way for Mod4Win to tell if your wave driver handles these queries correctly or not.   If you have a wave driver that behaves correctly (such as PAS 16, AudioTrix Pro, Gravis Ultrasound) , you can change this setting to **OFF**.   Mod4Win will then continue playing when you open the Setup Dialog.

Automatic Playback after Open

In the default setting (**ON**) Mod4Win will immediately start playing the current selection from the <u>Playlist</u> after you load files through the <u>Open Dialog</u>, pass command line parameters, or use <u>Drag & Drop</u>.   If you don't like that, simply turn it **OFF**.

Move Windows on Mouse Click

The default setting (**ON**) will allow you to move any of the windows belonging to Mod4Win simply by clicking on a non-active element and dragging the window to its new position. If you get annoyed by unintentionally moving windows around, simply turn this option **OFF**.

External Mixer

If your sound card can be controlled by software through a so-called mixer, use this edit field to specify the full path name of this file.   You can also use the button at the right to open a Browser Dialog that will let you easily find the file in your directory structure.

You can then use the Mixer Button in the Main Dialog to launch an instance of the mixer.   This is convenient as you don't have to look around your desktop or even in the File/Program Manager for this program.

Note: The mixer utility usually comes with your sound card and has nothing to do with Mod4Win, we just allow you to find it easier.

Hotkeys

This button will launch the Hotkey Editor Dialog where you can assign your own favorite Hotkeys to most of the functions in Mod4Win.

Archive Setup

This button will launch the <u>Archive Options Dialog</u> where you specify the path names and parameters of your archiver programs.

Language Selection

Click on this button to select a language.   Mod4Win will use this language to display most of the text in the dialogs and for the help file.

Currently Mod4Win comes with language modules for English and German.   More such modules may follow in the future.   Mod4Win will automatically scan for all available language modules and display them accordingly.

OK

closes the Setup Dialog and passes the settings to the Main Dialog.

Save Settings

closes the Setup Dialog, saves the settings in the file **mod4win.ini**, and passes them to the <u>Main Dialog</u>.

Quit

closes the Setup Dialog, discards all changes, and returns to the Main Dialog.

Archive Options Dialog

Use the mouse to click at the area you'd like to learn more about!
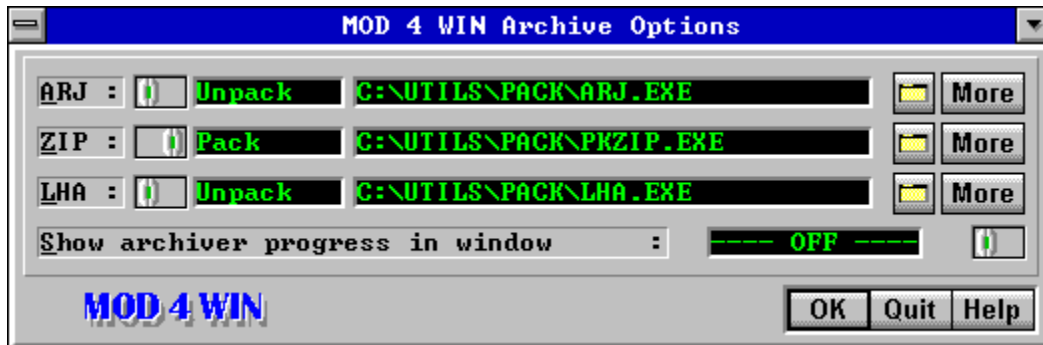
Use the Archive Options Dialog to specify all settings regarding archives. You can access this dialog only through the <u>Setup Dialog</u>. From here you can also launch an <u>Archive Parameters Dialog</u> for each archive type.

Pack/Unpack Switch

Use this switch to toggle between the pack and the unpack program for the archive type at the left when you specify the program files.   The current selection is shown to the right of the switch.

Note: You need to specify both, the pack program and the unpack program, even if they are the same.

Edit Fields for the Packer/Unpacker

Use this edit field to specify the full path name of the pack/unpack program for the archive type at the left.   You can also use the Browse Button at the right to open a Browser Dialog that will let you easily find the file in your directory structure.

Use the Pack/Unpack Switch to toggle between the two.

Browse Buttons

Use these buttons to open a Browser Dialog that will let you easily find the program file for the archive type at the left in your directory structure.

More Buttons

These buttons launch an Archive Parameters Dialog that will let you specify the command line parameters for the archiving program to the left.

Note: There is only one Archive Parameters Dialog for each archive type, independently from the position of the Pack/Unpack Switch.

Archiver Progress Display

Enable this option (**ON**) only for trouble shooting when you have problems getting your archivers to work.   Mod4Win will then display the output of your archiving program in a separate window and wait for you to close it before it proceeds.   For normal background operation of Mod4Win turn this option **OFF**.

OK

closes the Archive Options Dialog and returns to the Setup Dialog.

Note: The new settings will be effective immediately upon closing the Archive Options Dialog.   However, they'll be stored in the **mod4win.ini** file only if you choose Save in the Setup Dialog.

Quit

closes the Archive Options Dialog, discards all changes, and returns to the <u>Setup Dialog</u>.

Archive Parameters Dialog

Use the mouse to click at the area you'd like to learn more about!

Use this dialog to specify the command line parameters to be passed to your archivers.   You can access this dialog only through the Archive Options Dialog.

Unpack Parameters

Use this edit field to specify the parameters for the unpack program of the specified archive type.

See also: Reset Default Parameters

Pack Parameters

Use this edit field to specify the parameters for the pack program of the specified archive type.

See also: Reset Default Parameters

Delete Parameters

Use this edit field to specify the parameters for deleting a file from an archive with the pack program of the specified archive type.

See also: Reset Default Parameters

OK

closes the Archive Parameters Dialog and returns to the Archive Options Dialog.

Note: The new settings will be effective immediately upon closing the Archive Parameters Dialog.   However, they'll be stored in the **mod4win.ini** file only if you choose Save in the Setup Dialog.

Quit
closes the Archive Parameters Dialog, discards all changes,
and returns to the Archive Options Dialog.

Reset Parameters

restores all archive parameters for the specified archiver to their defaults.

The default parameters are optimized for ARJ 2.41, PKZIP/PKUNZIP 2.04g, and LHA 2.13.   If you use a different version of an archiver you may have to change some of the parameters.   Consult the manual or the help screen of your archiver for help about the parameters.

Hotkey Editor Dialog

Use the mouse to click at the area you'd like to learn more about!

The Hotkey Editor Dialog will let you assign customized <u>Hotkeys</u> to most of the functions in Mod4Win.   You can access this dialog only through the <u>Setup Dialog</u>.

List of Events

This list shows all events that can be assigned to individualized hotkeys.   Use the arrow keys to select the event to assign a hotkey to and then hit ENTER or TAB to switch to the Hotkey Display Field.

Hotkey Display Field

The Hotkey Display Field will show the current hotkey for the Selected Event.   The hotkey is composed of any key on your keyboard and optionally any combination of the CTRL, SHIFT, and ALT keys.   To change the old hotkey simply hit the combination of keys you want to constitute your new hotkey.

Note: Some key combinations like CTRL-ESCAPE, ALT-TAB, PRINT SCREEN, and so on, are reserved for special purposes by the Windows operating system and although you could re-define them as hotkeys for Mod4Win, it's a good idea to refrain from doing that.

Status of the Control Keys

These LEDs show which of the control keys CTRL, SHIFT, and ALT have been used to compose the hotkey for the Selected Event.

See also: Hotkey Display Field

OK

closes the Hotkey Editor Dialog and returns to the Setup Dialog.

Note: The new settings will be effective immediately upon closing the Hotkey Editor Dialog.   However, they'll be stored in the **mod4win.ini** file only if you choose Save in the Setup Dialog.

Quit

closes the Hotkey Editor Dialog, discards all changes, and returns to the Setup Dialog.

Reset Hotkey

restores the default hotkey for the Selected Event.

For a list of all default hotkeys see also the Hotkey Overview.

Browser Dialog

Use the mouse to click at the area you'd like to learn more about!

The Browser Dialog will help you find and specify executable files in the <u>Setup Dialog</u>. and the <u>Archive Options Dialog</u>.   It is indicated by a little button with a file icon.

Edit Field for the File and Path Name

This field allows you to directly enter the complete path name of the file you want to select.

This field will also be automatically updated when you make any choice in the <u>Filelist</u> or the <u>Directory List</u>.

Filelist of the Current Directory

This list contains all executable files in the current directory.
To select a file highlight it and then choose <u>OK</u>, or simply
double click it.

<u>Note</u>: executable files are those with either of the following extensions:
.PIF, **.EXE**, **.COM**, and **.BAT**.

Directory List

This list shows all drives and sub-directories in the current directory.   To view an entry in the <u>Filelist</u>, highlight it and hit ENTER or simply double click it.

OK

closes the Browser Dialog and passes the selected path name
to the calling dialog.

Quit

closes the Browser Dialog, discards all changes, and returns to the calling dialog.

Status Line

This line gives a brief description of the active element in the dialog.

If the active element is an entry in the Directory List the status line will show its type.

Open Dialog

Use the mouse to click at the area you'd like to learn more about!
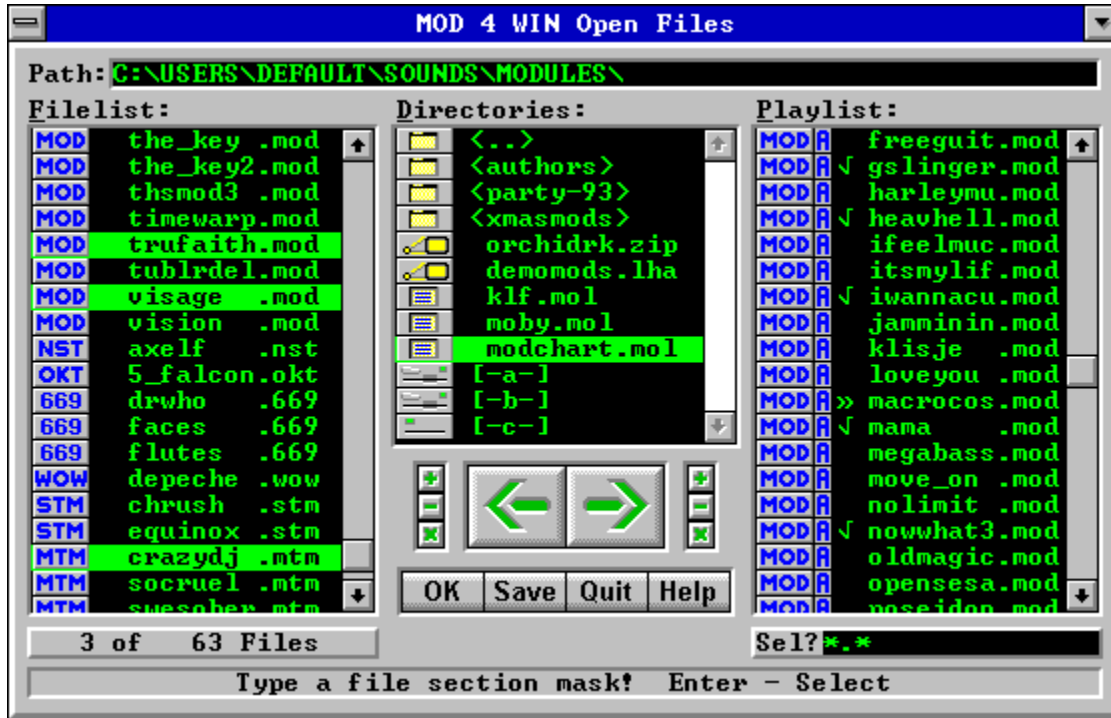
Use the Open Dialog to load files and create and save <u>Playlists</u>.   To make a selection simply click on the entry, then drag and drop all selections with the mouse.

see also:

       <u>Open Dialog Hotkeys</u>

       <u>Main Dialog</u>
       <u>Setup Dialog</u>
       <u>Info Dialog</u>
       <u>Effect Panel</u>

Path

shows the full path name of the current directory.

Filelist of the Current Directory

This list shows the filenames of all modules in the current directory (Path) except the ones already moved to the Playlist.

Only files with one of the extensions **.mod**, **.nst**, **.wow**, **.okt**, **.stm**, **.s3m**, **.669**, **.far**, and **.mtm** (these are the file types Mod4Win can handle) are displayed.   The type of the module is indicated by a little icon left from the filename.

To find a specific entry, simply start typing its file name and the cursor will go to the first module in the list that matches the input.

Selected Files

Selected files will be added to the <u>Playlist</u> when you click the <u>ADD</u> button or hit the cursor right key.

Directory List

This list shows all drives, archives, module lists, and sub-directories in the current directory (Path).   To view an entry in the Filelist, simply drag and drop it there with the mouse or hit ENTER.

Archives, module lists, sub-directories, and the different types of drives are all symbolized by unique icons to the left of the entry.

Playlist

This list holds the filenames of all modules in the current playlist.   These are the files that Mod4Win already played or is going to play.   The files will be played in exactly the same order as they appear in the playlist, unless you selected <u>Shuffle Mode</u>.

Only files with one of the extensions **.mod**, **.nst**, **.wow**, **.okt**, **.stm**, **.s3m**, **.669**, **.far**, and **.mtm** (these are the file types Mod4Win can handle) are displayed.   The type of the module is indicated by a little icon left from the filename.

Entries preceded by a check mark have already been played, the entry preceded by a double arrow is currently playing, all other entries are yet to be played.

To find a specific entry, simply start typing its file name and the cursor will go to the first module in the list that matches the input.

Selected Files

Selected files will be removed from the <u>Playlist</u> when you click the <u>Del</u>ete button or hit the cursor left key.

Played Songs

Songs with a check mark have already been played.

Current Song

The song marked with a double arrow is the currently selected song.   Its name is also visible in the Info Window of the Main Dialog.

Files in Current Playlist
These songs are yet to be played.

File in Current Directory

This is a song in the current directory (Path) that hasn't been added to the Playlist yet.

Delete Button

causes **all selected files** in the <u>Playlist</u> to be removed from it.

Add Button

causes **all selected files** in the <u>Filelist of the Current Directory</u> to be added to the <u>Playlist</u>.

Delete All

causes **all files** in the <u>Playlist</u> to be removed from it.

Add All

causes **all files** in the <u>Filelist of the Current Directory</u> to be added to the <u>Playlist</u>.

File Selection Buttons for the Filelist

Use these buttons to quickly (de-)select a large amount of files in the Filelist.

'+' Button: select files from the filelist
'-' Button: deselect files from the filelist
'*' Button: invert selections in the filelist

When you use the **'+'** or **'-'** button, a Selection Edit Field will pop up to let you edit the default selection mask (*.*) to your needs.   To use the default selection mask simply hit ENTER.

File Selection Buttons for the Playlist

Use these buttons to quickly (de-)select a large amount of files in the <u>Playlist</u>.

'+' Button: select files from the playlist
'-' Button: deselect files from the playlist
'*' Button: invert selections in the playlist

When you use the **'+'** or **'-'** button, a <u>Selection Edit Field</u> will pop up to let you edit the default selection mask (*.*) to your needs.   To use the default selection mask simply hit ENTER.

OK

closes the Open Dialog and passes the Playlist to the Main Dialog.

Save Playlist

will open the <u>List Name Edit Field</u> and then save the <u>Playlist</u> with the specified name and the extension **.mol** in the current directory (<u>Path</u>).

Quit

closes the Open Dialog and returns to the Main Dialog without passing the Playlist.

List Name Edit Field

If you click on SAVE, this edit field will pop up to let you specify a name for the Playlist.

You must specify a name here before you can proceed.   After you typed the name for the new playlist, hit ENTER to save the list or ESCAPE to abort.   If a list file with the specified name already exists, Mod4Win will prompt you whether to overwrite the existing file or not.

Number of Total and Selected Modules

This display will give you a quick overview of how many modules are currently in the <u>Filelist</u> and the <u>Playlist</u> and how many of them have been selected.

Selection Edit Field

This field lets you specify a selection mask after you hit one of the <u>File Selection Buttons</u>.

The syntax follows the regular syntax for file masks in MS-DOS, like the following examples: `new???.mod`, `*.mtm`, `c*.*`.   After you typed the selection mask hit ENTER to perform the (de-)selection or ESCAPE to cancel.

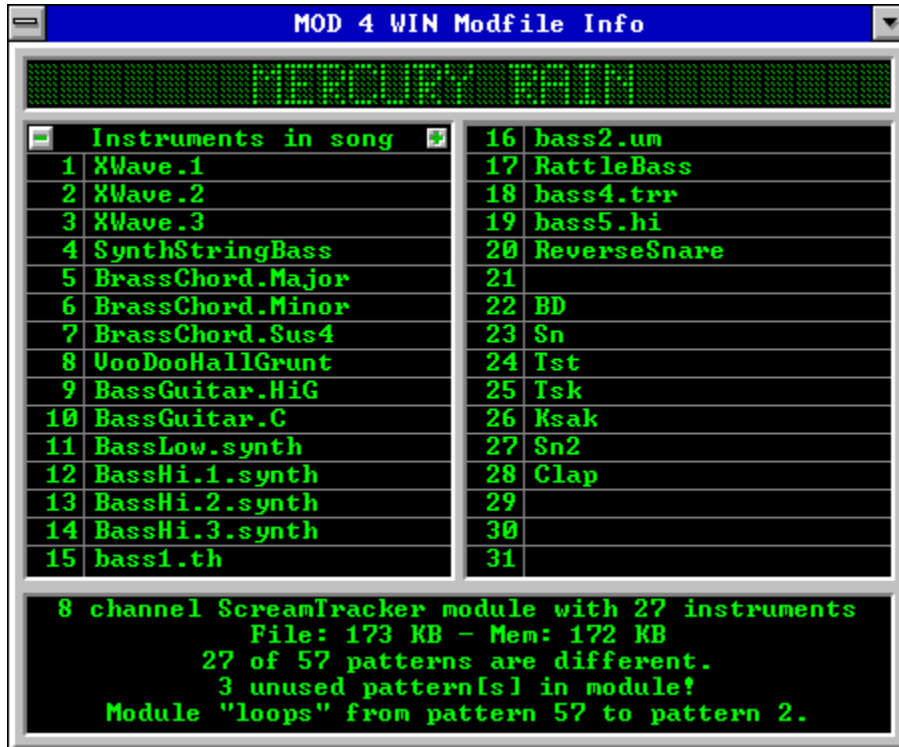## Status Line

This line gives a brief description of the active element in the dialog and the available commands.

If the active element is an entry in the <u>Directory List</u> the status line will show its type.   If it's a module in either the <u>Filelist</u> or the <u>Playlist</u> it will show the full path name.   For an archive and a module list file it will also show the size of the file.

Info Dialog

Use the mouse to click at the area you'd like to learn more about!

```
┌─────────────────────────────────────────────────────────┐
│ ▬           MOD 4 WIN Modfile Info                    ▼  │
├─────────────────────────────────────────────────────────┤
│  ▓▓▓▓▓▓▓▓▓▓▓ MERCURY RAIN ▓▓▓▓▓▓▓▓▓▓▓▓                    │
│ ┌─────────────────────────┬─────────────────────────────┐│
│ │ ⊟  Instruments in song ⊞│ 16 bass2.um                 ││
│ │  1 XWave.1              │ 17 RattleBass               ││
│ │  2 XWave.2              │ 18 bass4.trr                ││
│ │  3 XWave.3              │ 19 bass5.hi                 ││
│ │  4 SynthStringBass      │ 20 ReverseSnare             ││
│ │  5 BrassChord.Major     │ 21                          ││
│ │  6 BrassChord.Minor     │ 22 BD                       ││
│ │  7 BrassChord.Sus4      │ 23 Sn                       ││
│ │  8 VooDooHallGrunt      │ 24 Tst                      ││
│ │  9 BassGuitar.HiG       │ 25 Tsk                      ││
│ │ 10 BassGuitar.C         │ 26 Ksak                     ││
│ │ 11 BassLow.synth        │ 27 Sn2                      ││
│ │ 12 BassHi.1.synth       │ 28 Clap                     ││
│ │ 13 BassHi.2.synth       │ 29                          ││
│ │ 14 BassHi.3.synth       │ 30                          ││
│ │ 15 bass1.th             │ 31                          ││
│ └─────────────────────────┴─────────────────────────────┘│
│   8 channel ScreamTracker module with 27 instruments     │
│          File: 173 KB - Mem: 172 KB                      │
│        27 of 57 patterns are different.                  │
│          3 unused pattern[s] in module!                  │
│    Module "loops" from pattern 57 to pattern 2.          │
└─────────────────────────────────────────────────────────┘
```

The Info Dialog displays information about the module and the samples in it.   To get detailed information about an instrument, click the sample name to display the Instrument Info Dialog.

see also:

Info Dialog Hotkeys

Main Dialog
Setup Dialog
Open Dialog
Effect Panel

[Song Name](#)

shows the song name of the currently playing module.

If the song name is longer than the display allows, it will scroll through.

The file name of a MOD-File is mostly different from the name of the song it contains.

Instrument Scroll Buttons

Use these two buttons to scroll through the list of <u>Instruments</u>.

Some <u>Module Formats</u> may contain more than 31 instruments.

Instruments

shows the names of the individual samples in the current MOD-File.   To show Detail Information for any of the instruments simply click on its name.

This space is also frequently used as an about box (or similar) by the Composer of the song.

Module Information

This field shows detailed information about the current
module.   This includes
* the Module Format,
* the Number of Channels,
* the Number of Instruments,
* the File and Memory Size,
* the Number of Patterns and how many of them are different
  from each other,
* information about loops in the module,
* possible defects, and
* comments from the author (only in **.669**, **.FAR**, and **.MTM**
  modules).

File and Memory Size

displays the size of the module and the size of main memory required to store the module in KBytes.

Because most modules contain some redundant information, the memory size is frequently smaller than the file size.

One KByte equals 1024 bytes!

Number of Instruments

shows the number of samples in the module.

Depending on the Module Formats there may be up to 255 instruments in one module, however most formats are limited to a maximum of 31 possible instruments.   The actual number is usually still lower.

Number of Patterns

shows how many <u>Patterns</u> are used in this module and how many of them are different from each other.

The number of different patterns is usually lower, because the same pattern can be used more than once in the arrangement of the module.

MOD-Formats

The version 2.11 of Mod4Win supports many popular module file formats.   The following table gives an overview of all important formats and how they are supported in Mod4Win:

Format	File Name	Channels	max. Instr.	Reso- lution	M4W 1.x	M4W 2.00	M4W 2.1x
NoiseTracker	.NST	4	15	8	X	X	X
ProTracker	.MOD	4	31	8	X	X	X
StarTrekker	.MOD	4/8	31	8	4 chn	X	X
FastTracker	.MOD	4/6/8	31	8	4 chn	X	X
TakeTracker	.MOD	4-32	31	8	4 chn	X	X
Grave Composer	.WOW	8	31	8	-	X	X
Oktalyzer	.OKT	4-8	255	7/8	-	X	X
ScreamTracker 2.x	.STM	4	31	8	-	X	X
ScreamTracker 3.0	.S3M	1-32	99	8/16	-	-	smp
Composer 669	.669	8	64	8	-	X	X
UNIS Composer	.669	8	64	8	-	-	X
Farandole Comp.	.FAR	16	64	8/16	-	-	X
UltraTracker	.ULT	1-32	64	8/16	-	-	-
MultiTracker	.MTM	1-32	63	8/16	-	8 bit	X

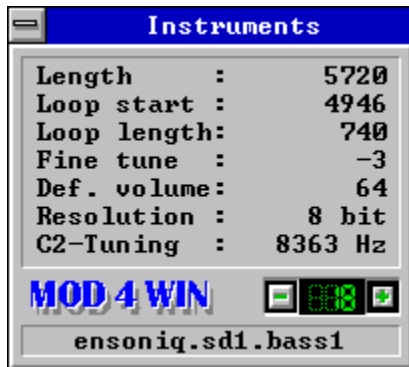|	
X	this format is fully supported
4 chn	this format was only supported for up to 4 channels
8 bit	this format was only supported for 8 bit source samples
smp	this format contains sampled and synthesized instruments
-	this format is currently unsupported

OK

closes the Info Dialog.

Instrument Info Dialog

Use the mouse to click at the area you'd like to learn more about!

This dialog shows detailed information about an instrument.   You can access this dialog only through the Info Dialog.

see also:

Instrument Info Dialog Hotkeys

Main Dialog
Setup Dialog
Open Dialog
Effect Panel

Instrument Number

shows the number of the instrument sample the current detail
information is displayed about.

Next Instrument

selects the next instrument sample to display detail
information about.

Previous Instrument

selects the previous instrument sample to display detail information about.

Sample Length

shows the length of the instrument sample in bytes.

Sample Loop Start

shows the position in bytes from which on the loop of the instrument sample starts.

Instrument samples are looped so they can be played longer than the length of the sample would allow otherwise.

Sample Loop Length

shows the length of the internal sample loop in bytes.

Fine Tuning

shows the fine tune value the instrument sample should be played with to achieve the note C-2.

Legal fine tune values are between -8 and 7, representing all possible semitone steps within an octave.   The fine tune value can also be changed for a single note using the Set Finetune effect.

C-2 Tuning

shows at what frequency in Hz the instrument sample is tuned to the note C-2.

Default Volume

shows the standard volume of the instrument sample.

Legal volume values are between 0 and 64.   The instrument will always be played at this default volume throughout the module unless overwritten with a Set Volume effect.

Sample Resolution

shows the sample depth of the instrument.

Different Module Formats have varying sample resolutions of either 7, 8, or 16 bit.
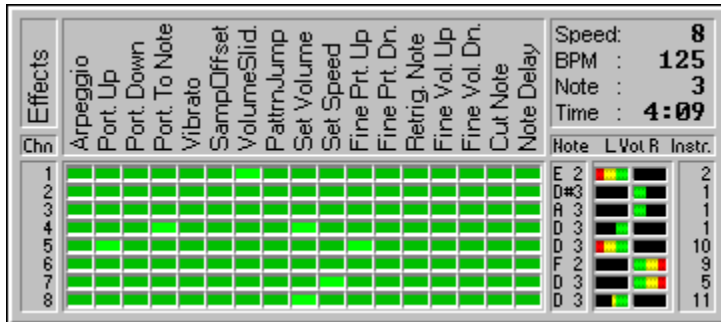
Instrument Name

shows the name of the instrument detail information is displayed about.

This field was originally intended to hold the instrument name.   However, it has become quite common that the authors use this space as some kind of about box for their work and dump all kinds of useful and useless comments in here.

The Effect Panel

Use the mouse to click at the area you'd like to learn more about!

The Effect Panel shows information about currently playing effects, notes, and instruments during playback of a song.   You can close it through a click with the right mouse button or by hitting ESCAPE.

see also:
>   Main Dialog
>   Setup Dialog
>   Open Dialog
>   Info Dialog

Channels

Each channel of the current module is shown in a separate row. There can be up to 32 channels, depending on the Format of the module being played.

Effects

This section shows all effects that are used in the current module in a separate column.   Some modules use 20 different effects or more, others don't use any.

For effect explanations see The Possible Effects in a Module.

Effect LED On

A light green LED signals that this <u>Effect</u> is currently playing in the particular <u>Channel</u>.

Effect LEDs

The effect LEDs will show when an <u>Effect</u> is playing in the associated <u>Channel</u>.   If an LED is on (<u>Effect LED On</u>) the effect is currently playing.

[Notes](#)

shows the note (pitch of the instrument) that's currently playing for each [Channel](#).

`C 2`   note C in Octave 2
`C#2`   note Cis in Octave 2 (C sharp)
`- - -`   no note is currently playing in this channel

Channel Volumes

These bars show the current volume and the left-right distribution for each <u>Channel</u>.   The length of the bar represents the channel volume, the position shows the panning position of the instrument.

This display says nothing about the current output level of this channel. The channel volume can be quite high, yet if there's no instrument playing, there'll be no output from this channel.

See also <u>Set Volume</u> and <u>Set Panning</u>

Instruments

shows the number of the instrument that's currently playing on each <u>Channel</u>.

Speed and BPM

shows the current tempo (ticks per division) and BPM-speed
(beats per minute) of the song.

See also Set Speed

Note (Division)

shows which division of the <u>Pattern</u> is currently playing.

Song Time

shows the duration of the current song in minutes and seconds.

The Possible Effects in a Module

Use the mouse to click at the effect you'd like to learn more about!

Standard	ProTracker	Oktalyzer	UNIS 669
Arpeggio	Set Filter	Arpeggio 1	FinePanLeft
Port. Up	Fine Prt. Up	Arpeggio 2	FinePanRight
Port. Down	Fine Prt. Dn.	Tone Up	SlotRetrigger
Port. To Note	Glissando	Tone Down	
Vibrato	Vibra-Wave	Tone Up 1	**Farandole**
Port.+VolSld.	SetFinetune	Tone Dn. 1	
Vibr.+VolSld.	PatternLoop	Old Volume	FAR Special
Tremolo	Trem-Wave		FinePitchUp
Set Panning	Set Panning	**ScreamTrack.**	FinePitchDn.
SampOffset	Retrig. Note		Note Portam.
VolumeSlid.	Fine Vol. Up	Tremor	Retrigger
PattrnJump	Fine Vol. Dn.	Xfin Prt. Up	VibratoDepth
Set Volume	Cut Note	Xfin Prt. Dn.	Vibrato Note
PattrnBreak	Note Delay	Retrig+VolSld	Vol. Slide Up
Set Speed	Pattrn. Delay	StereoControl	Vol. Slide Dn.
	Invert Loop	Set GlobalVol	Vibrato Sust.
		Set BPM-Spd	Vol. Portam.
			FineTempDn.
			FineTempUp

The Effects in MOD 4 WIN

This chart shows all possible effects that can occur in a module. The <u>Effect Panel</u> will show you which of these effects are used in the current module.

Period of the Current Sample

is a relic from the good old AMIGA days.   The period of a tone is indirectly proportional to its audible pitch.   Mod4Win still reproduces this period (even though with 32-folded precision).

Standard Effects

These effects are used in almost all Formats and provide the basics to influence pitch, volume, speed, and flow control in a module.

Arpeggio

Where [0][x][y] means "play note, note+x semitones, note+y semitones, then return to original note".   The fluctuations are carried out evenly spaced in one pattern division.   They are usually used to simulate chords, but this doesn't work too well. They are also used to produce heavy vibrato.   A major chord is when x=4, y=7.   A minor chord is when x=3, y=7.

Portamento Up

Where [1][x][y] means "smoothly decrease the Period of the Current Sample by x*16+y after each tick in the division". The ticks/division are set with the Set Speed effect.   If the period of the note being played is z, then the final period will be z - (x*16 + y)*(ticks - 1).   As the slide rate depends on the speed, changing the speed will change the slide.   You cannot slide beyond the note B3 (period 113).

Portamento Down

Where [2][x][y] means "smoothly increase the Period of the Current Sample by x*16+y after each tick in the division". Similar to Portamento Up, but lowers the pitch.   You cannot slide beyond the note C1 (period 856).

Portamento To Note

Where [3][x][y] means "smoothly change the <u>Period of the Current Sample</u> by x*16+y after each tick in the division, never sliding beyond current period".   The period-length in this channel's division is a parameter to this effect, and hence is not played.   Sliding to a note is similar to <u>Portamento Up</u> and <u>Portamento Down</u>, but the slide will not go beyond the given period, and the direction is implied by that period.   If x and y are both 0, then the old slide will continue.

Vibrato

Where [4][x][y] means "oscillate the sample pitch using a particular waveform with amplitude y/16 semitones, such that (x * ticks)/64 cycles occur in the division".   The waveform is set using the effect Set Vibrato Waveform.   By placing vibrato effects on consecutive divisions, the vibrato effect can be maintained.   If either x or y are 0, then the old vibrato values will be used.

Portamento + Volume Slide

Where [5][x][y] means "perform a <u>Volume Slide</u> with parameters x and y, at the same time as continuing the last <u>Portamento To Note</u>".   The period-length in this channel's division is a parameter to this effect, and hence is not played.

Vibrato + Volume Slide

Where [6][x][y] means "perform a <u>Volume Slide</u> with parameters x and y, at the same time as continuing the last <u>Vibrato</u>".

Tremolo

Where [7][x][y] means "oscillate the sample volume using a particular waveform with amplitude y*(ticks - 1), such that (x * ticks)/64 cycles occur in the division".   The waveform is set using effect Set Tremolo Waveform.   Similar to Vibrato.

Set Panning

Where [8][x][y] means "distribute the sample in this channel, such that (x*16+y)/128 of it are mixed into the right output and the rest into the left".   Hence a value of 0 means that this channel is completely mixed into the left output, a value of 128 means it is completely mixed into the right output.   A value of 64 means this channel is equally mixed into the left and right output and so on.   Legal pan values are from 0 to 128.

This effect plays the sample somewhere between the two speakers, rather than either left or right.   This dramatically improves stereo playback, especially when used with headphones.   The panning effect is ignored during mono playback.

Set Sample Offset

Where [9][x][y] means "play the sample from offset x*4096 + y*256".   The offset is measured in words.   If no sample is given, yet one is still playing on this channel, it should be retriggered to the new offset using the current volume.

Volume Slide

Where [10][x][y] means "either slide the volume up x*(ticks - 1) or slide the volume down y*(ticks - 1)".   If both x and y are non-zero, then the y value is ignored (assumed to be 0).   You cannot slide outside the volume range 0..64.

Pattern Jump

Where [11][x][y] means "stop the pattern after this division, and continue the song at pattern x*16+y".   Legal values for x*16+y are from 0 to 127.

Set Volume

Where [12][x][y] means "set the current sample's volume to x*16+y".   Legal volumes are 0..64.

Pattern Break

Where [13][x][y] means "stop the pattern after this division,
and continue the song at the next pattern at division x*10+y"
(the 10 is not a typo).   Legal divisions are from 0 to 63.

Set Speed

Where [15][x][y] means "set speed to x*16+y".   Though it is nowhere near that simple.   Let z = x*16+y.   Depending on what values z takes, different units of speed are set, there being two: ticks/division and beats/minute.   If z=0 it is treated as if z=1.   If z<32, then it means "set ticks/division to z" (speed), otherwise it means "set beats/minute to z" (BPM).   Default values are 6 ticks/division, and 125 beats/minute (4 divisions = 1 beat).   The beats/minute tag is only meaningful for 6 ticks/division.   If multiple "set speed" effects are performed in a single division, the ones on higher-numbered channels take precedence over the ones on lower-numbered channels.

ProTracker Effects

These effects are used by Pro-, Fast-, and TakeTracker as well as MultiTracker in addition to the Standard Effects.   Some of these effects are also available in Oktalyzer and ScreamTracker.   They provide enhanced control over pitch, volume, flow control, and some special effects in these modules.

Set Filter

Where [14][0][x] means "set sound filter ON if x is 0, and OFF is x is 1".

This is a hardware command for some Amigas and is not supported by the sound hardware on a PC.

Fine Portamento Up

Where [14][1][x] means "decrement the Period of the Current Sample by x".   The incrementing takes place at the beginning of the division, and hence there is no actual sliding.   You cannot slide beyond the note B3 (period 113).

Fine Portamento Down

Where [14][2][x] means "increment the Period of the Current Sample by x".   Similar to Fine Portamento Up but shifts the pitch down.   You cannot slide beyond the note C1 (period 856).

Glissando Control

Where [14][3][x] means "set glissando ON if x is 1, OFF if x is 0".   Used in conjunction with Portamento To Note.   If glissando is on, this effect will slide in semitones, otherwise will perform the default smooth slide.

Set Vibrato Waveform

Where [14][4][x] means "set the waveform of succeeding
Vibrato effects to wave #x".   Possible values for x are:

0:   sine (default)
1:   ramp down
2:   square
3:   random: a random choice of one of the above
4-7: same as x - 4, but without retrigger

If the waveform is selected "without retrigger", then it will not
be retriggered from the beginning at the start of each new note.

Set Finetune

Where [14][5][x] means "sets the finetune value of the current sample to the signed nibble x".   x has legal values of 0..15, corresponding to signed nibbles 0..7,-8..-1.

Pattern Loop

Where [14][6][x] means "set the start of a loop to this division if x is 0, otherwise after this division, jump back to the start of a loop and play it another x times before continuing".   If the start of the loop was not set, it will default to the start of the current pattern.   Hence 'loop pattern' cannot be performed across multiple patterns.   Note that loops do not support nesting, and you may generate an infinite loop if you try to nest 'loop pattern's.

Set Tremolo Waveform

Where [14][7][x] means "set the waveform of succeeding Tremolo effects to wave #x".   Similar to Set Vibrato Waveform, but alters the 'tremolo' effect.

Set Panning

Where [14][8][x] means "distribute the sample in this channel, such that x/15 of it are mixed into the right output and the rest into the left".   Similar to Set Panning.

Retrigger Note

Where [14][9][x] means "trigger current sample every x ticks in this division".   If x is 0, then no retriggering is done (acts as if no effect was chosen), otherwise the retriggering begins on the first tick and then x ticks after that, etc.

Fine Volume Up

Where [14][10][x] means "increment the volume of the current sample by x".   The incrementing takes place at the beginning of the division, and hence there is no sliding.   You cannot slide beyond volume 64.

Fine Volume Down

Where [14][11][x] means "decrement the volume of the current sample by x".   Similar to Fine Volume Up but lowers the volume. You cannot slide beyond volume 0.

Cut Note

Where [14][12][x] means "after the current sample has been played for x ticks in this division, its volume will be set to 0". This implies that if x is 0, then you will not hear any of the sample.

Note Delay

Where [14][13][x] means "do not start this division's sample for the first x ticks in this division, play the sample after this". This implies that if x is 0, then you will hear no delay.   Note that this effect only influences a sample if it was started in this division.

Pattern Delay

Where [14][14][x] means "after this division there will be a delay equivalent to the time taken to play x divisions after which the pattern will be resumed".   The delay only relates to the interpreting of new divisions, and all effects and previous notes continue during delay.

Invert Loop

Where [14][15][x] means "if x is greater than 0, then play the current sample's loop upside down at speed x".   Each byte in the sample's loop will have its sign changed (negated).

This effect is currently not supported by Mod4Win.

Oktalyzer Effects

These effects are only available in Oktalyzer modules in addition to most of the <u>Standard Effects</u> and some of the <u>ProTracker Effects</u>.

Arpeggio 1

Play note, note-x semitones, note, and note+y semitones, then return to original note.   Similar to Arpeggio.

Arpeggio 2

Play note, note+x semitones, note, and note-y semitones, then return to original note.   Similar to Arpeggio.

Tone Portamento Up

Decrease the <u>Period of the Current Sample</u> in semitone steps during the division with the speed XY.   Similar to <u>Portamento Up</u>.

Tone Portamento Down

Increase the Period of the Current Sample in semitone steps during the division with the speed XY.   Similar to Portamento Down.

Tone Portamento Up Once

Decrease the <u>Period of the Current Sample</u> by XY at the beginning of the division.   Similar to <u>Fine Portamento Up</u>.

Tone Portamento Down Once

Increase the Period of the Current Sample by XY at the
beginning of the division.   Similar to Fine Portamento Down.

Old Volume

Return the volume to its value before the last Set Volume effect.

ScreamTracker Effects

These effects are only available in ScreamTracker modules in addition to most of the <u>Standard Effects</u> and some of the <u>ProTracker Effects</u>.

Tremor (STM/S3M)

Periodically set the current sample's volume to 0 after X ticks
in the division and then restore the previous value after another
Y ticks in the division.

Extra Fine Portamento Up (STM/S3M)

Decrement the <u>Period of the Current Sample</u> by 1/4*Y.

Similar to <u>Fine Portamento Up</u>, but four times more accurate.

Extra Fine Portamento Down (STM/S3M)

Decrement the <u>Period of the Current Sample</u> by 1/4*Y.
Similar to <u>Fine Portamento Down</u>, but four times more
accurate.

Retrigger + Volume Slide (S3M only)

Perform a Retrigger Note with parameter Y and additionally apply a Volume Slide for each retriggered note.   The amount of the slide is determined by the parameter X.

Stereo Control (S3M only)

This effect is currently unsupported by Mod4Win because we have no information what it is supposed to do.   If you do, please let us know.

Set Global Volume (S3M only)

Set the global volume to the given value.   This effects all channels in addition to the Set Volume effect for a single channel.   Legal volumes are 0..64.

Set BPM-Speed (S3M only)

Set the BPM-speed to the given value.   This effect is similar to Set Speed, but it always sets the BPM-speed (tempo). Legal tempos are 32..255.

ScreamTracker implements two commands to set the speed since both, ticks/division and beats/minute may have values greater 31.

UNIS 669 Effects

These effects are only available in UNIS (extended) 669 modules.   They are provided in addition to some of the Standard Effects.

Fine Panning Left

Shift the current pan position one notch to the left.

There are 16 different pan position in UNIS 669.

Fine Panning Right

Shift the current pan position one notch to the right.

There are 16 different pan position in UNIS 669.

Slot Retrigger

This command rapidly fires 4 slots.   The command parameter specifies the speed at which to do it.   The speed difference across the values is exponential.

This effect is only approximately supported in Mod4Win because no one seems to know what exactly exponential speed difference means.

Farandole Composer Effects

These effects are only available in Farandole modules.   They are provided in addition to <u>Set Speed</u>, <u>Set Panning</u>, and <u>Cut Note</u>.

Farandole Special Commands

This is a group of five sub-commands ("Turn volume ramp wait off/on", "Allow loop fulfillment", and "Use modified/standard FAR tempos").

All of these special commands are currently unsupported.   We don't have a single module that uses any of those so we had no means of testing them.

Fine Pitch Up

Increase the pitch immediately by the given parameter.

Fine Pitch Down

Decrease the pitch immediately by the given parameter.

Note Portamento

Slide from the current pitch to the pitch specified on the line where the command is issued.   The parameter tells in how many rows the pitch should have gotten to the destination.

[Retrigger](#)

Repeat the current note X times in this division.   If a drum is issued as the note and the parameter is 2 then the drum should be played 2 times during that division, in evenly spaced intervals.

Vibrato Depth

Set the depth for the <u>Vibrato Note</u> and <u>Vibrato Sustained</u> effects.

Vibrato Note

Vibrato this note.   Although it goes away if you stop using it, this effect when used repeatedly actually just tells FAR to continue the previous vibrato, which may span several notes depending on how large it is.

Volume Slide Up

Increases the volume one notch.

There are only 16 different volumes defined in FAR.

Volume Slide Down

Decreases the volume one notch.

There are only 16 different volumes defined in FAR.

Vibrato Sustained

Is the same as <u>Vibrato Note</u>, but it doesn't stop until this command is reached again with parameter 0.

Volume Portamento

This uses the same method as the Note Portamento command, but it acts on the volume.

Fine Tempo Down

Slightly decreases the FAR tempo.

In Mod4Win this is realized by changing the BPM-speed.

Fine Tempo Up

Slightly increases the FAR tempo.

In Mod4Win this is realized by changing the BPM-speed.

Shareware Notes

Differences between Shareware- and Full Version

Principally shareware- and full version are **equally powerful**.   That of course, shouldn't stop you from asking "Why should I buy the full version?"   We figured that a limited shareware version makes no sense, because naturally, a feature that hasn't been implemented in the shareware version can't be tested by you.   Exempt from that is the ability to save your own playlists which is only allowed if you own a registered copy.

At the end of the program we refer to the necessity of the full version, if you want to use the program frequently.   To motivate you, we also imposed an **involuntary pause** at the end of the program, and to make sure you won't forget, Mod4Win will **remind you** every once in a while that you're not a registered user yet.   Of course you will be spared all of this, if you purchase a copy of the full version of the program.   Additionally, you can determine by the text in the About Dialog what version you are currently using.   If you use the full version, you will find your name (the name of the license holder) here.

Documentation

A handbook for this handy program seems to us much too clumsy and therefore probably won't be issued.   If you would like to have something on paper, feel free to spool this text to your printer, or to a file where you can chop it down further with a word processor.

The Full Version directly from JSInc.

Please refer to the section **Registration for Mod4Win 2.11**!

Retail Sales of the Full Version in the U.S.

The full version can only be ordered from JSInc. at this moment.   So please don't harass your favorite computer store around the corner with repetitive questions for the full version, they would have to order it explicitly from me.   It is even possible that they will slander the quality of the program because of that.   But of course you know better, right?

Update Service

Registered users can always order the latest update directly from JSInc.

For details see the section **Updating to Mod4Win 2.11** please!

License Regulations

This program is **not freeware**!   Mod4Win is **shareware**, that means software you can test for a certain time and then have to purchase or delete from your disk.   The copyright for this program (**mod4win.exe**, **player32.dll**) and its help (**m4w_usa.hlp**) is held by **JSInc.**   You are granted a period of **30 days**, in which you can test the program.   If you want to use Mod4Win after this test period, you are required by federal law to purchase a registered copy.

All attempts to defeat the shareware check and the 30 days trial limit are unlawful and strictly prohibited.   If such attempts become known, JSInc. reserves the legal right to prosecute the offending party.

You are explicitly encouraged to spread the unregistered version of Mod4Win to other PC users, such that they also have a chance to test the program.   This is valid with the following restrictions:

1. You are not allowed to make money with it (for copying and distributing), and
2. You have to distribute all files that belong to the program and to its documentation.

Modifications of a file that belongs to the Mod4Win package are strictly prohibited!

This help is part of the program Mod4Win and may only be distributed together with the program as mentioned above.

Disassembling and/or patching of the program or its help file is absolutely prohibited.

Preventively we'd like to mention that **JSInc.** owns the copyright for all routines used in this program.   Intellectual theft on any of the programming and/or design techniques used in Mod4Win may be subject to prosecution.

The shareware version may be distributed by shareware dealers for no more than $10.   If you belong to those who pay more than $10 to acquire shareware, then you should look around for a new source.

With the purchase of the full version of the program Mod4Win, the user acquires the right to install this program on his/her machine and use one registered copy on exactly one machine at a time.   For each additional machine the user is required to purchase another copy, even if that wouldn't be necessary from a technical point of view.

The user may make copies of the original disk only for the purpose of data security.   However, it is strictly prohibited to distribute copies of the software or make them available to a third party.

Possession of the registered version is permitted only to the registered user.

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