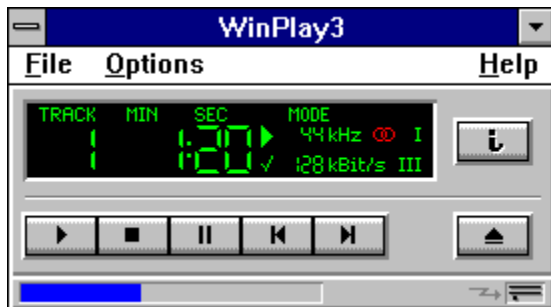# Welcome to **WinPlay3** V2.0

The world's first *real-time* **ISO/MPEG Audio Layer 3 Player**
for PCs running Microsoft® Windows™

Click any control to get more information.

General

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Menus in WinPlay3

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How to buy WinPlay3

All information you need to buy **WinPlay3** is given in the file *register.txt* which is part of this DEMO-package.

For ***on-line registration*** refer to **http://www.opticom.de/**

For further information and dealer requests, please contact:

OPTICOM	Fax: +49-9131-691325
Dipl.-Ing. Michael Keyhl	Email: info@opticom.de
Am Weichselgarten 7	WWW: http://www.opticom.de/
D-91058 Erlangen	
Germany	

System Requirements

Processor:

For using **WinPlay3** you need at least a 80486 class CPU with a built-in floating-point-unit (although a *Pentium™* is recommended).

The following matrix shows the real-time performance of **WinPlay3** on INTEL machines:

	Pentium	486DX2-66	486DX-50	486DX-33
MPEG-1 stereo	yes	no	no	no
MPEG-1 downmix*	yes	yes	no	no
MPEG-1 mono	yes	yes	yes	no
MPEG-2 stereo	yes	yes	yes	no
MPEG-2 downmix*	yes	yes	yes	yes
MPEG-2 mono	yes	yes	yes	yes

downmix: mono audio output generated from a stereo input

Audio Output:

A 16-bit stereo *sound card* is recommended. The card's MCI driver should support sampling frequencies from *8 kHz* to *48 kHz*.

A 8-bit stereo *sound card* is also OK, but the sound quality lacks much.

Graphics Card:

A standard VGA graphic card is necessary.

Memory:

About 1 MB free physical memory must be available, because **WinPlay3** buffers up to 4 seconds of sound data due to limitations of the Microsoft® Windows™ multitasking architecture.

Operating System:

Microsoft® Windows™ 3.1/3.11 - running in 386 enhanced mode, Windows 95 and Windows NT (long filenames are not supported in this version of WinPlay3).

About ISO/MPEG Audio Coding

Basic scheme:

The *ISO/MPEG Audio Coding Standard* describes the compression of audio signals using *high performance* perceptual coding schemes. It specifies a family of three audio coding schemes, simply called *Layer 1*, *Layer 2* and *Layer 3*.

Compression gain (**Sound quality per bit**) and encoder complexity increase from *Layer 1* to *Layer 3*.

All *Layers* use the same basic structure. The coding scheme can be described as *perceptual noise shaping* or *perceptual subband/transform coding*.

The **encoder** analyses the spectral components of the audio signal by calculating a filterbank or transform and applies a psychoacoustic model to estimate the just noticeable noise-level. In its quantization and coding stage, the encoder tries to allocate the available number of data bits in a way to meet both the bitrate and masking requirements.

The **decoder** is much less complex. Its task is to synthesize an audio signal out of the encoded spectral components.

Compression rates:

You can achieve a **compression rate** of

1:4	with *Layer 1* (or 192 kbps per audio channel),
1:6..8	with *Layer 2* (or 128..96 kbps per audio channel), and
1:10..12	with *Layer 3* (or 64..56 kbps per audio channel),

and the reconstructed audio signal will maintain a **CD-like** *sound quality*.

Getting more Information:

For *more information* about **ISO/MPEG Audio Layer 3**, feel free to contact us:

Fraunhofer-IIS
Weichselgarten 3
D-91058 Erlangen
Germany

Fax: +49-9131-776-399 (Harald Popp)
Email: layer3@iis.fhg.de
WWW: http://www.iis.fhg.de/
ftp: ftp://ftp.fhg.de/pub/layer3

or read our **online FAQ** about **MPEG Audio Layer3**, **Fraunhofer IIS**, and all the rest...

http://www.iis.fhg.de/departs/amm/layer3/sw/

Supported MPEG Audio Files

Currently, **WinPlay3** supports ISO/MPEG-1 (IS 11172-3) and
ISO/MPEG-2 (IS 13818-3) Layer 3 audio files.
MPEG-2 multichannel extensions are not supported in this version of **WinPlay3**.

WinPlay3 decodes Layer 3 bitstreams in *full quality and real-time*.

About the Authors

WinPlay3 was developed by

Fraunhofer Gesellschaft - Institut für Integrierte Schaltungen
Department Audio/Multimedia

in Germany.

Getting more Information:

Visit our *WebSide* for information about our research activities.

http://www.iis.fhg.de/

For *more information* about **WinPlay3**, feel free to contact us:

Fraunhofer-IIS	Fax: +49-9131-776-399 (Martin Sieler)
Weichselgarten 3	Email: winplay3@iis.fhg.de
D-91058 Erlangen	WWW: http://www.iis.fhg.de/
Germany	ftp: ftp://ftp.fhg.de/pub/layer3

Free Demo ISO/MPEG Layer 3 Files

Check out

http://www.iis.fhg.de/departs/amm/layer3/winplay3/

for _free_ demo files

Select _Save only_ and check the _Play after_ box in the URL Options Dialog if you have a _slow_ connection to the Internet.

Technical Support

If you are a *registered* owner of **WinPlay3**, you may get **technical support** by:

OPTICOM
Dipl.-Ing. Michael Keyhl
Am Weichselgarten 7
D-91058 Erlangen
Germany

Fax:	+49-9131-691325
Email:	support@opticom.de
WWW:	http://www.opticom.de/

MMP (Multimedia Protection Protocol)

MMP was developed by

Fraunhofer Gesellschaft - Institut für Integrierte Schaltungen
Department Audio/Multimedia

in Germany.

MMP introduces a new and convenient way to ensure **copyright protection** for all kind of digital data.

MMP was especially designed for **copyright protection of multimedia data**, e.g. digital **audio tracks** or digital **video clips**.

For *more information* about MMP, feel free to contact us:

Fraunhofer-IIS	Fax: +49-9131-776-399 (Niels Rump)
Weichselgarten 3	Email: mmp@iis.fhg.de
D-91058 Erlangen	WWW: http://www.iis.fhg.de/
Germany	ftp: ftp://ftp.fhg.de/pub/layer3

or visit our **WebSite** about **MMP**:

http://www.iis.fhg.de/departs/amm/layer3/mmp/

File Menu

```
Play File...
Play Location...

Exit            Alt+F4
```

- Play File

    Play an *ISO/MPEG Layer 3* File from **local drives**.

- Play Location

    Play an *ISO/MPEG Layer 3* File from a **WorldWideWeb**-Server.

- Exit

    Exit **WinPlay3**.

Options Menu

```
Output...
Play...

Proxy...
Url...

Register...
```

- Output

Select **WinPlay3**'s output parameters to match your PC hardware capabilities.

- Play

Select *Repeat* or *Shuffle* mode. (*Note: Shuffle is not yet implemented in this version of WinPlay3.)*

- Proxy

Let's you select a **Proxy** in case you are *behind* a firewall.
If you are not sure whether you need a Proxy or not - look at the settings of your **WorldWideWeb**-Browser or ask your *system-administrator*
(You won't need a **Proxy**, if you are directly connected to the *Internet*).

- Url

Select the mode in which **WorldWideWeb**-connections are handled.

- Register

Register your copy of **WinPlay3** to get its *full* capabilities by entering your name and registration-code.

Help Menu

```
Index...        F1
How to buy...
Using Help...
─────────────────
About...
```

- Index

   Open *this* Helpfile.

- How to Buy

   Get Information on how to get your *personal registration-code*

- Using Help

   Open the Microsoft® Windows™ "Help on Help".

- About

   Display **WinPlay3**'s *version* and *copyright* information.

Known Problems

Video adapter & Sound cards

Some video adapters influence the DMA transfer to the sound card.
There may be drop-outs - most likely when you move or scroll windows - even if you *have* a fast CPU.
This is not a bug in **WinPlay3** - it will happen as well if you use the *Windows Media Player*.

Incompatible Layer3 files

Some first-generation layer3 encoder produce layer3 files which are not compliant with the ISO/MPEG standard. A message box will pop-up to indicate such files.

DOS Boxes

DOS boxes influence significantly the multitasking behaviour of Microsoft Windows. Since **WinPlay3** requires cooperative multitasking, the use of DOS boxes may cause drops of audio data during a play process, especially on slow machines.

Titlebar

Displays the name of the current track.

Track

Displays the current track number.

Time

Displays the current playing time.

Status

Displays wether **WinPlay3** is *playing* or *paused*.

Synchronization Status

Displays the *Synchronization Status*.

Frame Counter
Displays the number of decoded Frames.

Sample Rate

Displays the sample rate of the current track.

Stereo

If current track is stereo recorded, this indicator is lit.

ISO/MPEG Version

Displays the current ISO/MPEG Version
(ISO/MPEG-1 or ISO/MPEG-2).

Bitrate

        Displays the Bitrate of the current track.

ISO/MPEG Layer

Displays the ISO/MPEG Layer of the current track
(Always "III" in **WinPlay3**).

Play

Play a Layer 3 audio track or continue playing if Pause was pressed.
Replay the current track by a double-click.

Stop

Stop playing a Layer 3 audio track.

Pause

Pause playing a Layer 3 audio track.

Last track

Seek to the last Layer 3 audio track of the playlist.

Next track

Seek to the next Layer 3 audio track of the playlist.

Eject

Open the [Play dialog](#).

Info

Displays information about the current track.
Extended information is available for **MMP** files.

Progress Status

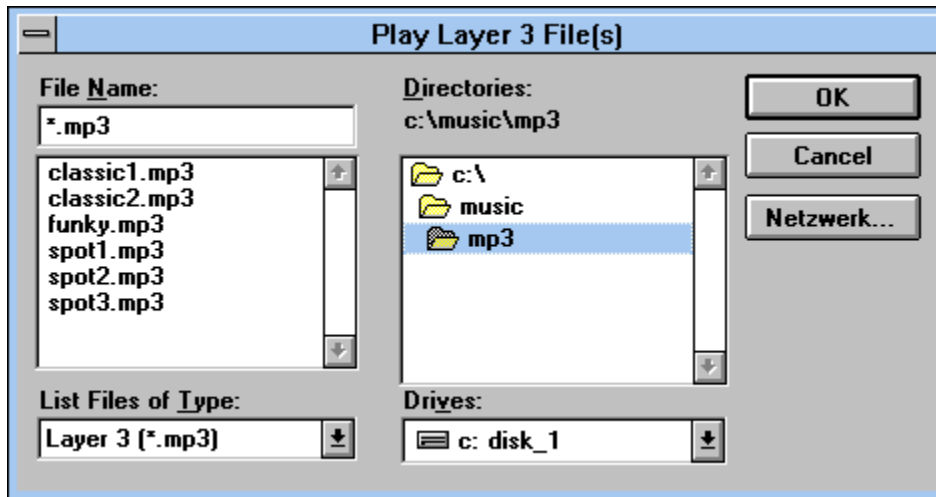Displays the *Progress* Status.

HTTP Indicator

This indicator gets highlighted if you play *directly* from a **WorldWideWeb**-Server.

File Indicator

This indicator gets highlighted if you play a file from one of your **local drives**.

Play File Dialog

Click any control to get more information.

Play Layer 3 File(s)	

File Name:
`*.mp3`

classic1.mp3
classic2.mp3
funky.mp3
spot1.mp3
spot2.mp3
spot3.mp3

List Files of Type:
Layer 3 (*.mp3)

Directories:
c:\music\mp3

c:\
music
mp3

Drives:
c: disk_1

OK
Cancel
Netzwerk...

Select File

Specify ISO/MPEG Layer 3 audio files to play.
You can use the **CTRL** and the **SHIFT** key to select multiple files.

Select directory
Selects the current directory.

Select filter

Selects the current file extension filter.

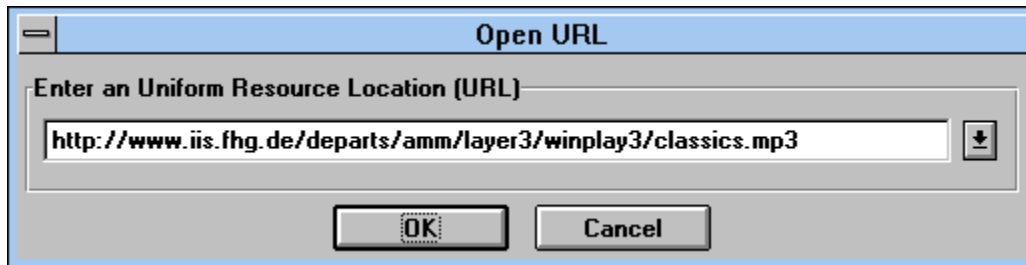**Select drive**

Selects the current drive.

OK

Confirm and save your selection.

Cancel
        Discard your selection.

Play Location Dialog

Click any control to get more information.

Open URL

Enter an Uniform Resource Location (URL)

http://www.iis.fhg.de/departs/amm/layer3/winplay3/classics.mp3

OK   Cancel

Url Location

Enter a **URL** (*Uniform Resource Locator*) here.

Popup

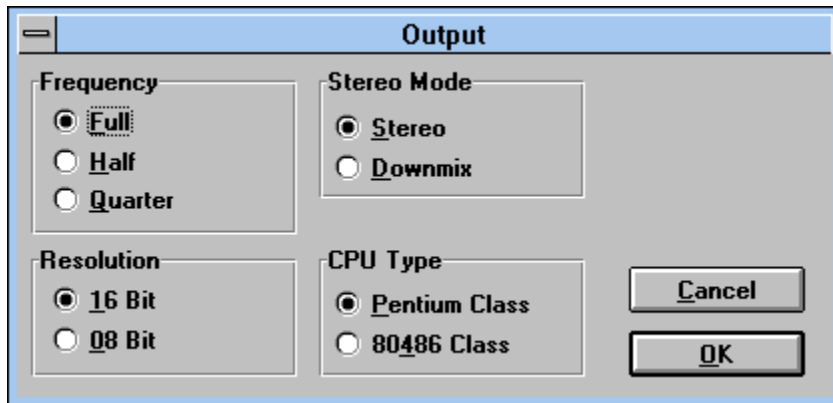Press this button to get a list of last recently selected **URL**s.

OK

Confirm and save your selection.

Cancel
Discard your selection.

Options Output Dialog

Click any control to get more information.

Output

Frequency
- ⦿ Full
- ○ Half
- ○ Quarter

Stereo Mode
- ⦿ Stereo
- ○ Downmix

Resolution
- ⦿ 16 Bit
- ○ 08 Bit

CPU Type
- ⦿ Pentium Class
- ○ 80486 Class

Cancel

OK

Output Frequency

If you have an audio device that does not support the sample rates
of the MPEG audio files (32 kHz, 44.1 kHz or 48 kHz),
or your CPU is 486 class, select **Half** or **Quarter**.
User of Pentium CPUs should select **Full**.
(Default setting when you start **WinPlay3** the first time)

Output Resolution

Select **8 bit** if you only have an 8 bit audio board.
Otherwise, select **16 bit**.
(Default setting when you start **WinPlay3** the first time)
Note: Only 16 bit audio boards guarantee full listening satisfaction.

Output Stereo Mode

If you only have a mono output device, or you want to speed up the decoding process, select **Downmix**. This is especially necessary on the 486 machines with stereo bitstreams.

CPU Type

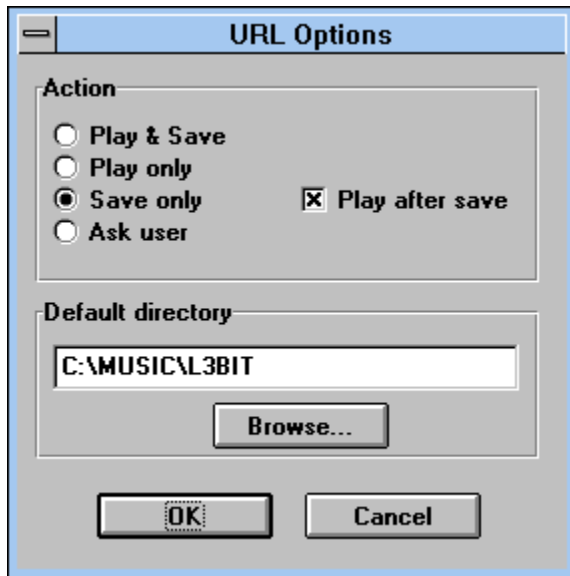Select the **CPU Type** of your PC.

OK

Confirm and save your output settings.

Cancel
  Discard your output settings.

Options URL Dialog

Click any control to get more information.

URL Options

Action
- ○ Play & Save
- ○ Play only
- ◉ Save only   ☒ Play after save
- ○ Ask user

Default directory

C:\MUSIC\L3BIT

[Browse...]

[OK]   [Cancel]

Play & Save

WinPlay3 will prompt for a filename before playing a file from a **WorldWideWeb**-Server.

Play only

WinPlay3 will play files from a **WorldWideWeb**-Server *without* saving to disk.

Save only

WinPlay3 will save files from a **WorldWideWeb**-Server without playing them.

Ask user

Let **WinPlay3** popup a dialog every time you play a file from a **WorldWideWeb**-Server.

Play after save

WinPlay3 will play a file *after* downloading it from a **WorldWideWeb**-Server.

Default Directory

Enter the default directory in which you want to store files downloaded from a **WorldWideWeb**-Server.

Browse

Click here to *point & select* the default directory.

OK

Confirm and save your URL settings.

Cancel

    Discard your URL settings.

Ask User Dialog

Click any control to get more information.

Please select

Do you want to...

Play & Save

Play only

Save only   ☐ Play after save

Cancel Request

Play & Save
WinPlay3 will prompt for a filename before playing the file from a **WorldWideWeb**-Server.

Play only

       WinPlay3 will play the file from a **WorldWideWeb**-Server *without* saving to disk.

Save only
WinPlay3 will save the file from a **WorldWideWeb**-Server without playing it.

Play after save

WinPlay3 will play the file *after* downloading it from a **WorldWideWeb**-Server.

Cancel Request

Cancel a request for playing a file form a **WorldWideWeb**-Server.