

Default

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Chapter 1

Default

1.1 Table of contents

SongPlayer 1.3 (15-Jun-1998) GIFTWARE

Introduction

Requirements

Installation

Use

CLI Options

AREXX

Utilities

History

In the future

Distribution

Disclaimer

Thanks

About the author

1.2 Introduction to SongPlayer

SongPlayer is an audio file player of various formats

.

It can play 8 or 16 bits samples, mono or stereo ones, compressed or not.

It can be used as a shell utility thanks to its command parameters or with the Workbench with its graphical interface

MUI

.

The 16 bit sounds are played in 14 bit with the calibration principle of Christian ←
BUCHNER or

in real 16 bit via a sound card with

AHI

.

Others features:

- Playlists
- Karaoke mode to see lyrics
- Pseudo-stereo effect for mono files
- Scopes (CPU, Vu-meters, Level-meters, Spectrum analyzer)
- Treble and bass adjustment
- Audio data base
- AREXX
- Read of compressed XPK files

1.3 Supported audio formats

IFF 8SVX PCM format and Fibonacci delta

AIFF 8 or 16 bits and

ADP4

(ADPCM 4)

WAVE 8 or 16 bits

AU 8 or 16 bits and ULAW

MPEG Layer I, II and III. Norm 1, 2 and 2.5

1.4 adp4

I have implemented an ADPCM 4-bits (ADaptative Pulse Code ←
Modulation) compression for the AIFF format.

This format divide by 4 the size of the original 16-bit sample.

The Compress/Expand processes are relatively simple and give very good results, ←
that's why

I decided to add this format.

See

Utilities

1.5 Requirements

An
Amiga
A MC68EC020 or +

Amiga Workbench 3.0 or +

MUI V3.3 or + (not needed for a command line use)

Only one version of SongPlayer is provided for 68EC020 to 68060.

The mpega.library (aminet/util/lib) that correspond to your CPU.

1.6 Installation of SongPlayer

Click on the installation icon (you should have the 'Installer' utility)

That's all :)

1.7 Use

The
main
window

The

scopes
window

The

karaoke
window

The

karaoke editor
window

The

audio data base
window

The

options
window

The

menus

1.8 Main window

Song List:

The song list contains the current files selected for playing. This list can be filled or loaded with the eject button or with the menu "Project/Open". You can choose audio files or play lists. It is possible to add files to the current list with the menu "Project/Append". To remove an entry in the list, just select the line to remove and press DEL key or select the menu "Project/Close". The list can be cleared with the menu "Project/Close all". The entries of the list can be moved to change the list order. This list can be saved with the record button or with the menu "Project/Save" or "Project/Save as". The total play time and the number of songs of the list are always displayed at the top of the list.

File Info:

The file info text area shows information about the selected file. It is composed of a maximum of 3 lines. When the play list is not active, one more line shows the duration and the title of the current file. These 3 lines are:

- Artist and album of file
- The file format
- The file comment

Time Slider:

This slider allows to seek into the current file.

Volume:

The volume button switches between Normal volume and Boost volume. Normal volume gives a slider from 0 to 64 and Boost volume from 0 to 256 (256 = 400% boost).

Balance:

The button resets the balance. The slider goes from -64 (full left) to +64 (full right).

Bass & Treble:

These features are available when the Bass & Treble adjust is enabled in the Audio Options. The buttons reset the bass or the treble (set to 0dB). The sliders adjust the bass or treble from -20dB to +20dB.

Buttons:

Most of the buttons can be hide (see the option window) in order to simplify the control bar.

1.9 Scopes window

This window contains the various scopes selected in the Options/Scopes window. There are 4 types of scopes.

Vu-meter: A hand indicator of the sound level.

Level-meter: A bar graph indicator of the sound level.

Spectrum analyzer: An 8 frequencies band level indicator.

CPU usage: A gauge that indicates the CPU % used for audio decoding.

1.10 Karaoke window

This window display the song text in a karaoke way. One or two lines can be displayed. In case of a 2 lines display, the bottom line is the coming text.

1.11 Karaoke editor window

This window allows you to create or modify a karaoke file. Each line of the list correspond to one karaoke line. A line is composed of a time and a text line. The time format is MM:SS.T, i.e. minutes, seconds and 1/10th second. This time indicate when the text has to be displayed.

EDITING

Copy: Copy the current line to the clipboard
Cut: Copy the current line to the clipboard and remove it from the list
Paste: Insert the clipboard line after the current line

The string text just bellow the list allows you to modify the selected karaoke line (you must press Enter to validate the modification).

Pick Time: When you click on this button, the current playing time is copied to the editing line. This feature is very interesting: You only have to enter all the song text without considering the time. Then, select the first line, play the song and click on this button each time the selected line must be displayed.

FILES

Load: Load an existing Karaoke file (.kok).
Import: Import a text file to the editor.
Save: Save the editor content to a Karaoke file (.kok).

Karaoke file format:

Each line of this text file has the following format:

MM:SS.T <Karaoke text>

MM:SS.T is the time of display the karaoke text.
The karaoke text is the rest of the line.

Lines must be ordered by time.

1.12 Options window

The options window allows you to customize SongPlayer. These options are saved in file "SongPlayer.cfg" of the SongPlayer program directory.

There are 5 separate settings:

The Main settings
The Audio settings
The Karaoke settings
The Scopes settings
The MPEG Audio settings

1.13 Main settings

File

Auto play:
Start to play automatically after the load of a new play list.

Inter file delay:
Wait time between two successive plays.

Initial drawer:

It's the starting drawer of the audio file selector.

Initial file:

It's the file to load automatically at SongPlayer start.

File pattern:

It's the pattern of the file selector used at the load time.

Playlist pattern:

It's the accept pattern of the playlists. Only playlist filenames that correspond to this pattern will be examined.

Load in RAM:

Every audio file is loaded in RAM before playing.

Buffer size:

Size of memory buffer used for file access.

Use XPK:

Use XPK library for loading compressed files.

Display

File list	Show/hide the current play list
Artist & album	Show/hide artist and album of current file
File format	Show/hide the current file format
File comment	Show/hide the curent file comment
Volume & Balance	Show/hide the volume and balance
Time slider	Show/hide the time progress bar
Sizable window	Enable the window resizing
Playlist window	Open a window for the playlist

Buttons

Allows to choose the buttons to show in the control bar.

Intro duration: play duration of the intro mode

1.14 Audio settings

Use AHI: Use the AHI system for the audio output.

You have to select an AHI audio mode with the selector button a the end of the line.

Mixing Mode:

There are 3 mixing modes: Off, On and Auto.

Off: No mixing, the audio output frequency is equal to the audio file frequency.

On: The mixing is always performed. The audio output frequency is set to the value of the "Mixing frequency" Slider.

Auto: The mixing is only enabled when the audio file frequency is lower than the "Limit frequency" Slider.

Note: If the requested audio frequency is too high for your computer (depending on the video mode for built-in audio), the mixing is automatically enabled and set to the maximum frequency supported.

Bass & Treble Adjust:

This feature allows to adjust the bass and the treble in the Main Window. WARNING this function may use a lot of CPU time on slow machines.

Priority: It's the audio decoding process priority.

Buffer Size: This slider sets the size of the audio buffer in memory. It corresponds to the amount of pre-decoded audio.

1.15 Karaoke settings

Karaoke Window: Opens or closes the karaoke window.

Display:

The karaoke window can display 1 or 2 lines. When 2 lines mode is selected, the bottom line shows the coming text.

Advance Time:

This value allows to display the karaoke lines a little time before it should appear normally. This value is subtracted to the time of the karaoke line to get the corrected time of display.

Has priority:

The default karaoke path has priority against current directory.

Default path:

You can specify here the location of your karaoke files. Normally, these files are in the same directory as the associated audio file. But, sometimes, it is not always possible to do so (like on a CD-ROM already burned). If the karaoke file can't be found, then it is searched with this default path.

Fonts:

You can choose your own fonts for each line of the karaoke window.

1.16 Scopes settings

Scopes window:

Opens or closes the scopes window.

Vu-Meters

The vu-meters are indicators with a hand.
They show the current sound level.

None: No vu-meter

Normal: Use a standard MUI indicator

Custom: Customized indicator

The following colors can then be modified:

- Back
- Scale
- Needle

Level-Meters

The level-meters are line indicators.
They show the current sound level.

None: No level-meter

Normal: Use a standard MUI gauge

Custom: Customized level-meter

The following colors can then be modified:

- Back
- Body
- Top

Spectrum-Meters

The spectrum meters are bars indicators.
They show the current levels of 8 bands of frequency.

None: No spectrum-meter

Normal: Use standard MUI gauges

Custom: Customized spectrum-meter

The following colors can then be modified:

- Back
- Body
- Top

Show CPU Usage:

When enabled, the current CPU usage used for audio file decoding is displayed in a scale gauge.

Fixed levels:

When enabled, the scopes are volume independant.

Priority:

It's the indicators display process priority.

Refresh delay:

It's the refresh rate of the indicators in video frames.

1.17 MPEG Audio settings

These options allows to setup the decoding quality of MPEG Audio files. Because this audio decoding is very CPU intensive, on slow CPU (<68040), you will need to decrease the quality and/or the decoding frequency. You can have 2 different settings for Mono files and Stereo files because stereo files need almost 2 time more CPU than mono files. There are 2 separates options for MPEG I & II and MPEG III because MPEG III needs more CPU power than I or II. So you can have better settings for MPEG I & II than MPEG III.

Quality:

High: Perform the full decoding process
 Medium: Perform almost 1/2 of the decoding process
 Low: Perform almost 1/4 of the decoding process

Max Freq:

If the audio file frequency if greater than this value, the MPEG decoder try to divide by 2, then by 4 the output audio frequency. When the frequency is divided the decoder needs less CPU. So if you have a slow CPU, set the Max Frequency to a low value.

Force to Mono:

In order to reduce the CPU usage when decoding stereo files, you can force the decoder to use only 1 voice (left), so saving almost 50% of CPU.

1.18 The menus

```
PROJECT
Open...           Load audio files or playlists
Append...        Add audio files to the current list
Close            Remove the current file of the list
Close all       Clear the list
-----
Save             Save the current playlist
Save as...      Save the current playlist with a new name
-----
About...        Infos about the author and greetings
About MUI...    Infos about MUI
-----
```

Quit	Quit SongPlayer
DISPLAY	
File list	Show/hide the current play list
Artist & album	Show/hide artist and album of current file
File format	Show/hide the current file format
File comment	Show/hide the curent file comment
Volume & Balance	Show/hide the volume and balance
Time slider	Show/hide the time progress bar
Sizable window	Enable the window resizing
Playlist window	Show playlist in a window
WINDOWS	
Scopes	Open/close the scopes window
Karaoke	Open/close the karaoke window
Karaoke editor	Open/close the karaoke editor window
Audio database	Open/close the audio database
SETTINGS	
Options...	Open the settings window of SongPlayer
MUI...	Open the settings window of MUI

1.19 Audio database

The audio database allows you to class all your audio files. It is build in an hierachical manner, 4 levels:

```
Genre
  Artist
    Album
      Title
```

For each file you can associate a title, an album, an artist, a genre, its duration and a comment.

At the input of this informations, SongPlayer use the informations in the file to fill by advance several fields. So, for an MPEG file, if this one had TAG ID's, they will be used to fill all the fields.

The window of this database allows you to navigate through the hierarchy and to use drag & drop to the current play list. Four buttons are located at the bottom of the window:

```
New:      Create a new element in the database
Edit:     Edit an element in the database
Delete:   Remove an element from the database
Save:     Save the database
```

The database is located in the file 'SongPlayer.aub'

1.20 CLI use

CLI Usage : SongPlayer Name/M, V=Verbosity/N, AHI=AHIMode/N,
 MIX=Mixing/N, BUFF=Buffer/N, EXP=Expand/N,
 VOL=Volume/N, BAL=Balance/N, B=Bass/N, T=Treble/N,
 Filter/N,
 GUI/S, ICONIFIED/S

Name: Names of audio files to play

Verbosity: 0 = no display, 1 = info about samples

AHI: AHI Mode ID in HEXADECIMAL

Mixing: Mixing frequency on audio output (0 = no mixing)

Buffer: 50..10000 = size of audio buffer in milliseconds

Expand: 0 = normal, 1 = pseudo stereo.

Volume : 0..256 (65 to 256 are boost values)

Balance: -64 (full left) to +64 (full right)

Bass: -20 to +20 dB

Treble: -20 to +20 dB

Filter: Enable audio filter (only Amiga build-in audio hardware)

GUI: Open the Graphical User Interface

ICONIFIED: Starts into icon mode

1.21 AREXX commands

The Arexx address is SONGPLAYER.x, x is the number of the SongPlayer active copy. If SongPlayer is launched only one time, the address is also SONGPLAYER.1.

The Arexx commands available are:

ICONIFY STATE/F	Iconify or not the application
OPEN FILES/M, NOPLAYLIST/S	Load files into the playlist Don't load playlists if specified
ADD FILES/M, NOPLAYLIST/S	Add files to the playlist Don't load playlists if specified
CLOSE	Remove the current file from the playlist
CLEAR	Clear the playlist
PLAY	Start the audio playing

PAUSE STATE/F	Set the pause state
STOP	Stop the audio playing
NEXT	Select the next file in the playlist
PREV	Select the previous file in the playlist
SELECT INDEX/N	Select the given file number in the playlist
QUIT	Quit SongPlayer
RANDOM STATE/F	Enable or disable the random mode
INTRO STATE/F	Enable or disable the intro mode
EXPAND STATE/F	Enable or disable the pseudo-stereo mode
FILTER STATE/F	Enable or disable the audio filter
VOLUME LEVEL/N	Adjust the volume
BALANCE LEVEL/N	Adjust the balance
BASS LEVEL/N	Adjust the bass
TREBLE LEVEL/N	Adjust the treble
SEEK SECS/N	Seek time
GET_TIME seconds)	Get the current time position of the playing file (in ←
GET_STATE	Get the state of the audio part { STOP PLAY PAUSE }
GET_SELECTED	Get the index of the selected file

Note: STATE = { ON | OFF | 0 | 1 }

1.22 Distribution of SongPlayer

This program is copyright (c) 1994-1997 by
Stéphane TAVENARD

It may be distributed freely under the condition that no profit is gained from its distribution, nor from any other program distributed in the same package.

Permission is granted to distribute this package by Bulletin Board systems or network sites, under the condition that no fee is charged on downloading it.

All files that are part of this package have to be distributed together and none of them may be changed in any way other than archiving or crunching. The only exception to this rule are the

icons, including the tooltypes, which may be changed to accommodate them to the rest of the disk it is distributed on.

This program is distributed as
GIFTWARE

.

1.23 Utilities

AudioConvert

This utility allows you to convert a raw file (RAW) or AIFF in
AIFF

ADPCM4

. Other options allow to convert in mono a stereo file or to
change the sampling frequency.

Usage: AudioConvert [<options>] <input file> <output file>

options:

-if <freq> input frequency (for raw file)
-it <tracks> input tracks (1 or 2, only for raw file)
-f <freq> output frequency
-m force mono output file
-t <type> output type {RAW|AIFF|ADPCM}
-is input swap little <-> big endian in 16-bit input file

To convert a 16-bit AIFF file in

ADPCM4

AIFF, the command is:

AudioConvert -t ADPCM <input file> <output file>

1.24 In the future...

- Support of other audio formats
- Use of PPC ?
- More audio effects
- Real karaoke function (suppress of voices)

1.25 History of SongPlayer

V0.1	08-May-1994	Initial version, unique format: IFF 8SVX
V0.2	10-Nov-1994	Added IFF Fibonnacci delta
V0.3	29-Jul-1995	Added AIFF, AU, WAVE
V0.5	05-Nov-1995	Added MPEG format
V0.6	07-Jul-1996	use of MUI
V0.63	09-Feb-1997	First Aminet release

V1.0	28-Aug-1997	New design Playlists MPEG 1, 2 and 2.5 Layer III Scopes Karaoke AHI.
V1.2	23-Mar-1998	Less bugs Localization More options ! Use mpega.library for the audio decoding AppIcon & AppWindow Audio database Random play Intro mode Arexx XPK Support
V1.3	15-Jun-1998	Fixed bug when filling fields in audio data base from TAG ↔ 's ID Added Loop button Updated TAG's ID list Added "Load in Ram" option Level meters can be independant from volume (option) XPK use as option now Increased stacks of all processes Corrected some bugs in Audio process (mpega library for ↔ PPC can be used now) Added File buffer configuration Enhanced File loading (more speed) Karaoke default path can have priority against current ↔ directory as option The playlist can have its own window (option) Added NOPLAYLIST/S option in Arexx open & add commands to ↔ prevent loading playlists Fixed bug on playlist handling that caused GURU's Custom Fonts for Karaoke window

1.26 Copyrights

MUI is copyright (c) Stefan STUNTZ
EMail: stuntz@sasg.com

AHI is copyright (c) Martin BLOM
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1.27 Thanks

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