

SoundDT v40.42 Guide

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Chapter 1

SoundDT v40.42 Guide

1.1 SoundDT v40.42 Documentation

SoundDT v40.42

A replacement soundclass for the DataTypes system.

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|------------------------|--|
| • Introduction | Why a soundclass replacement? |
| • Installation & Use | Installing and using the software. |
| • Legal Issues | License, distribution, disclaimer. |
| • Credits | Thanks and credit where credit is due. |
| • Problems | Known bugs/problems |
| • History | History of changes. |
| • Future | Plans for future versions. |
| • Magic User Interface | Information about MUI. |

1.2 SoundDT v40.42 - Introduction

Why a new DataTypes soundclass?

Short answer: sunau.datatype

Long answer:

The DataTypes soundclass provided with AmigaOS 3.0 has a few annoying limitations. Foremost, it does not support double-buffering, and cannot play sounds longer than the hardware limit of 128 kilobytes. Secondly, it must load all sample data into chip RAM, of which a modern Amiga has only 2 megabytes. Loading the sample into fast RAM, of which a modern Amiga may have over a gigabyte, makes more room available for sample data. Last, the button image (a little speaker icon) lacks style and visual impact.

In addition, the Commodore sunau.datatype assumes that it runs under AmigaOS 3.1, and loads sample data into fast RAM, when possible. Users of AmigaOS 3.0 hear only static, when that happens.

My sound.datatype v40.42 fixes these annoying little problems.

Features

- Playing sounds from fast RAM.
- Double-buffering to play sounds longer than the hardware limit of 128k.
- Easy method to abort sounds.
- ~Snazzy gadget image.
- ~Preferences editor to manipulate options.

1.3 SoundDT v40.42 - Installation & Use

Installation

This sound.datatype requires AmigaOS 3.0 and up. The Preferences editor requires Magic User Interface, and would not exist without it.

To install this new DataTypes class, copy the file sound.datatype from the archive to SYS:Classes/DataTypes, either with the CLI, or your favorite directory tool. Also, copy the program in the Prefs drawer to the SYS:Prefs drawer. That's it.

You may wish to retain a backup copy of the original sound.datatype, in case any problems appear. Simply copy SYS:Classes/DataTypes/sound.datatype to a safe place.

Use

Use this version exactly as you would use the original Commodore version, with one exception. A double-click on the gadget will abort the sound, if it is currently playing.

Preferences

The included Preferences editor controls a number of attributes of the sound.datatype. Its menu items and Save/Use/Cancel buttons behave in the same manner as the editors supplied with the OS, as described in the Amiga User Interface Style Guide. Its gadgets control the following:

Sound register page:

Channel Selection Order

Controls the order in which the sound.datatype attempts to allocate audio channels. If the first one is in use, it then tries to use the next one in the list, and so on. Use standard MUI drag&drop to select the channel order you wish to use.

Appearance register page:

Colors

Waveform - Color of the pen used to draw the waveform in the gadget.
Background - Color of the background pen for the gadget.
Highlight - Currently unused.

Default Size

Width - Size (in pixels) the sound.datatype reports to an application program as its nominal size. Note that an application program may or may not choose to use this size.

Height - Size (in pixels) the sound.datatype reports to an application program as its nominal size. Note that an application program may or may not choose to use this size.

1.4 License, Distribution, Disclaimer

License

Under this license, you are granted use of the sound.datatype v40.42 ('the software') for any purpose, free of charge. Installation and use of the software implies your acceptance of the terms of this license.

Distribution

This software is freely distributable in the form of the compressed archive released by Jonathan Gapen, and in this form only. You may not add or remove any files, but you may convert the archive into another format. All methods of distribution are allowed. However, no fees for the distribution of this software may be charged, beyond the cost of media and compilation.

Disclaimer

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1.5 SoundDT v40.42 - Credits

Special thanks are due:

- Stefan Ruppert, for including source code with his binary.datatype, which gave the best example of exactly how to create the shared library, confirmed my suspicions on how to write a superclass, and saved me from a number of stupid mistakes.
 - Olaf Barthel, for including source in his aiff.datatype, which shows how sound subclasses allocate sample memory, and further clarification of some finer points of library creation.
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- Randall Jesup and David Junod, for the DataTypes system.

No thanks to:

- Commodore International Limited

1.6 SoundDT v40.42 - Known Bugs

- BOOM! CRASH! THUD! when running MCP.

It seems that the CopyMemQuicker patch in MCP causes problems with the Commodore 8svx.datatype and IFF 8SVX sound files in which an ANNO chunk precedes the VHDR chunk. I've stepped through the code with CodeProbe, and found that internal sound.datatype data structures are corrupted inside datatypes.library code.

- The gadget image doesn't like Multiview with SysIHack!

Actually, Multiview itself doesn't like SysIHack; it assumes a fixed size for the system scrollbars. Therefore, it reports the wrong values for the inner dimensions of the window to the DataTypes object. I can't fix it without a bad hack, and it's only a cosmetic bug, so I leave it alone.

If it really bothers you, get AmigaOS 3.1, or write a new Multiview.

1.7 SoundDT v40.42 - Future

I have a few plans for future features. Take a look:

- AHI Support

Awaiting completion of the new device-based interface to AHI.

- Bigger! Better! More!

I have defined a new compatible API for multi-channel sounds of up to 32-bit resolution, and even implemented it. Now I need to write good player routines for AHI and the Paula chip.

1.8 SoundDT v40.42 - Magic User Interface

The SoundDT Preferences editor uses:

MUI - MagicUserInterface

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MUI is a system to generate and maintain graphical user interfaces. With

the aid of a preferences program, the user of an application has the ability to customize the outfit according to his personal taste.

MUI is distributed as shareware. To obtain a complete package containing lots of examples and more information about registration please look for a file called "muiXXusr.lha" (XX means the latest version number) on your local bulletin boards or on public domain disks.

If you want to register directly, feel free to send

DM 30.- or US\$ 20.-

to

Stefan Stuntz
Eduard-Spranger-Straße 7
80935 München
GERMANY

Support and online registration is available at

<http://www.sasg.com/>

1.9 SoundDT v40.42 - History of Changes

v39.30

- ~First public release.

v39.35 (non-released version)

- Added a Preferences editor! Now you can set the colors, default size of the gadget imagery, and the channel selection order.
- Fixed a silly little bug that caused the audio player routine to try playing a double-buffered sound again even if the application disposed of the object, and likely as not causing a crash. Oops.
- Fixed a problem in the AmigaGuide documentation that caused the links on the main page to disappear with AmigaGuide® v40.

v39.36

- Channel selection order added to settings.

v39.39 (interim beta release)

- New double-buffering routines that abort!
- ~While a sound plays, selecting the gadget, or using STM_PLAY re-starts it.
- ~STM_STOP now supported.
- New routines fix another stupid bug that could leave the audio player process hanging around after the application disposed of the object.

v40.42

- Bumped version to v40 to take advantage of sub-classes loading data into fast RAM. (As modern Amigas tend to have more fast than chip RAM.)
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