QUICKSAMPLER

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COLLABORATORS

	TITLE :		
	QUICKSAMPLER		

ACTION	NAME	DATE	SIGNATURE
WRITTEN BY	Mario Kubek	July 31, 2024	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

Chapter 1

QUICKSAMPLER

1.1 Table of contents QUICKSAMPLER

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                    QUICKSAMPLER  ©

        A program for reading digital audio data (CDDA) out
                     of CD-ROM drives.
            QUICKSAMPLER V1.5  ©~1996/1997 by Mario Kubek
                   ALL RIGHTS RESERVED!
                 Version 1.5 July 30 1997
               Date of the last change: July 31 1997.
                   Author: Mario Kubek
                 This program is Freeware!
```

1.2 Introduction

1.1 Introduction

QUICKSAMPLER is a program for reading digital audio data (CDDA) out
of CD-ROM drives, which are capable of sending digital audio data
(16 Bit) over the SCSI bus.
This data can be saved in a file to a disk.
This version works with TOSHIBA drives.

1.3 Requirements

1.2 Requirements

You need to run the program an AMIGA (that's clear) with at least a
68020 processor and a SCSI-Controller with CD-ROM drive, which is able of
sending digital audio data (16bit) over the SCSI bus.
Most drives do not support this feature. Take a look at the compatibility
list Compatibility to get to know, if your
drive has this ability.
I recommend the use of TOSHIBA drives. I own the TOSHIBA XM-5301B and
it works great.

Kickstart 3.0 is required, but it should also work with Kickstart 2.xx
(not tested).

1.4 Features

1.3 Features

QUICKSAMPLER V1.0 can/does...

...save CDDA data (whole songs or part of songs) to a file in a very
   FAST way.
...save the audio data in the fileformats: CDR, RAW, 8SVX
...convert the CDDA data to following samplerates: 44100 (44.1 kHz),
   22050 (22.05 kHz), 14700 (14.70 kHz), 11025 (11.025 kHz)
...change the byte order (MSB [Motorola format] at first or LSB [Intel
   fromat] at first) when saving 16bit data.
...change the audio channels in the file: STEREO, CHANGE STEREO
   CHANNELSIDE (what you normally hear on the left speaker of the CD
   is the right channel in the file and what you hear on the right
   speaker is the left channel in the file), LEFT ON BOTH CHANNELS
   (what you can hear on the left channel on a CD is what you get
   on both channels in the file, the right one has no influence), RIGHT
   ON BOTH CHANNELS (what you hear on the right channel on a CD is what
   you get on both channels in the file, the left one has no influence),
   MONO (the left and the right channel are summed up and devided by 2),
   MONO_LEFT (you will get only the left channel in the output file),
   MONO_RIGHT (you will get only the right channel in the output file).
...offer you a good looking process bar.
...tell you using the GUI how many bytes will have the output file.

...check before writing to disk, if there is still enough place.
   Imagine you want to create a file, which is bigger than the available
   free space on the disk. Then QUICKSAMPLER creates the audio file, sets
   it's size, which is calculated with the help of intern routines. During this
   process it can happen that the end of the disk is reached. In this
   case QUICKSAMPLER closes and deletes the file, because it does not
   make sense to write to a file, which wouldn't contain all the data
   you wanted to have in it. Some other programs do not check the free
   diskspace. They simply write the audio data to the file after they
   have created it. So it could happen that during the writing process
   (lets say 1 or 2 minutes later) the end of the disk is reached.
   What now? The user loses time and audio data, which should be in the
   file.
...not waste ram-memory. The allocated memory is determined using
   the WB-tooltype "BUFBLOCKS" or with the CLI-Argument "BUBLOCKS".
   BUFBLOCKS can be a number between 0 and 65. The smaller the number
   is, the smaller is the allocated memory and QUICKSAMPLER must read
   from the CD more often. The bigger the number is, the bigger is
   the allocated memory and QUICKSAMPLER must read from the CD less
   often. Default number is 32. There are 3 buffers that have to be
   allocated. The sizes of them are calculated with the formula
   (BUFBLOCKS*2352/a_number_between_1_and_17) or
   (BUFBLOCKS*2352*2) when data in RAW 16bit STEREO 44.1 kHz are changed
   (CHANNEL processing) and saved. Actually during the reading and
   writing process only 2 buffers are used. Which buffer is used
   depends on the fileformat of the output-file.

...offer you a fast reading and writing routine (also for STEREO 8SVX).
   It is not so compulsory to write such a routine as you might think of.

ATTENTION: The best quality 44.1 kHz is waste of diskspace, because
           you normally hear tones (only) until approximately 20 kHz.
           I suggest the samplingrate 22050.
           A file with 22.05 kHz is half so big as a file with 44.1 kHz.

1.5 Installation

1.4 Installation
Simply drag the drawer of this program (it is the best if all additional
files are in it e.g.: the documentations) where do you want to have it.

1.6 Functions

1.5 Functions

The program should be controlled by the following tooltypes:

DEVICE=<your_scsi_device> Default is squirrelscsi.device.
UNIT=<your_unit_number>   Default is 2.
BUBLOCKS=<a_number_between_0_and_65> Default is 32.
   The allocated memory is determined using

    the WB-tooltype "BUFBLOCKS" or with the CLI-Argument "BUBLOCKS".
    BUFBLOCKS can be a number between 0 and 65. The smaller the number
    is, the smaller is the allocated memory and QUICKSAMPLER must read
    from the CD more often. The bigger the number is, the bigger is
    the allocated memory and QUICKSAMPLER must read from the CD less
    often. Default number is 32. There are 3 buffers that have to be
    allocated. The sizes of them are calculated with the formula
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    (BUBLOCKS*2352*2) when data in RAW 16bit STEREO 44.1 kHz are changed
    (CHANNEL processing) and saved. Actually during the reading and
    writing process only 2 buffers are used. Which buffer is used
    depends on the fileformat of the output-file.

THE GUI:

The all gadgets should be self-explaining.

          GADGET   FUNCTION

Sliders: - "TRACK"   Chosing of the audio track on the
                                    CD, from which should be sampled.

         - "FROM"   Gives the starting position for
                                    sampling in minutes and seconds.

         - "TO"   Gives the ending position for
                                    sampling in minutes and seconds.

String: - ""   There you can enter the name of
                                    the output file.
                                    ALWAYS PRESS THE RETURN KEY after
                                    you have entered the name of the
                                    file or you will not be able to
                                    sample. ("DO IT!" Gadget is still
                                    ghosted.)

BUTTONS: - "FILE"   A requester will appear in which you
                                    can enter the name of your output file
                                    with the path.

         - "DO IT!"   Press it and the sampling process
                                    should start.
                                    THIS BUTTON WILL ONLY BE ENLIGHTENED
                                    IF YOU HAVE GIVEN A VALID OUTPUT FILE.
                                    If your drive does not support the
                                    of digital audio data, you will
                                    receive an error message.

         - "ABORT"   Stops the sampling process.

         - "ABOUT"   Shows information of the program and
                                    the author.

CYCLES: - "CHANNELS"   Take a look at the ~Features
                                    -list to get to know the function.

         - "FORMAT"   Changes the output format: RAW, CDR

```
                                       (data with no loss of quality),
                                       8SVX (IFF-Format 8 bit)

          – "BITS"                     Changes the bit-resolution (8/16bit)
                                       when saving in the RAW-format.

          – "FREQ"                     Changes the frequency: 44.1 kHz,
                                       22.05 kHz, 14.7 kHz, 11.025 kHz.

          – "MSB/LSB"                  Changes the byte order when saving
                                       in RAW 16bit.

Take a look at ~Bugs  and
      ~Compatibility
      and  History of QUICKSAMPLER
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1.7 Compatibility

1.6 Compatability

```
CD-ROM drive               works y/n
----------------------------------
-TOSHIBA drives                y
 since 3401
```

Others may work, but I haven't tested them! Try it with yours!

1.8 Errormessages

1.7 Errormessages

There are many and various errormessages in the program. They are
easily to understand and must not be explained here. In most
cases when an error occures during the reading process, the sampling
is stopped (for instance: if your drive does not support the function
of reading digital audio data or when it is not compatible with the
TOSHIBA drives or the command of reading digital audio is not
compatible with your drive.

1.9 Bugs

1.8 Bugs

Currently none known.

1.10   History of QUICKSAMPLER

2.1 History of QUICKSAMPLER

Version 1.00 (first release)

Version 1.5 (second release)

It includes...

...a speed increased reading and writing routine.

...a check, in which a routine determines automatically if there is
   a CD in drive or even not (with the help of the timer.device).
   In the previous version this check was performed using
   IntuiMessages. But if your CD drive was not mounted, the program
   could not receive an IDCMP_DISKINSERTED or IDCMP_DISKREMOVED
   message. And if you have inserted or removed a CD, QUICKSAMPLER
   could not recognize this diskchange and the display was not
   updated with the data of another CD or it was not cleared if
   no CD was inserted. Because of that you had to quit and restart
   the program to make the diskchange visible.
   This problem is now fixed. Now every 2 seconds the program
   checks if there is a CD in drive or not.

...the default-"device"-name "squirrelscsi.device", because in the
   last version the predefined name "1230scsi.device" caused an
   error, which was the reason for the little fragment "ice", which
   appeared, when you wanted to switch to 14700 Hz with the help of
   the Cycle-Gadget "FREQ". Somehow MaxonC++ has put the last part
   of the string "1230scsi.device", which is "ice", into textfield
   of the "FREQ"-Gadget, which should show "14700".
   This is not a programming-mistake, but surely a compiler-bug,
   because with the now intern used string "squirrelscsi.device"
   this error did not appear any longer.
   This problem is now fixed.

...several intern improvements.

Take a look at ~Bugs and
       ~Compatibility .

1.11   TO DO

2.2 TO DO

- support for more CD-ROM drives

  If you have any wishes or ideas for the development of QUICKSAMPLER
  it would be nice if you could get in contact with me
   ~Author .

1.12   Author,Updates,Sourcecode,Registration

3.1 Author,Updates,Sourcecode,Registration

The program QUICKSAMPLER and this document are written by

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Bugreports and ideas for improving this program are welcome.

Where do I get the Updates?

Updates of QUICKSAMPLER you will find in the Aminet(Aminet/disk/cdrom).

The proram is written in C. You can get the sourcecode if you send me
a disk with your name.

If you find this program good, then you can send me a small fee
about 15DM or US$10 in an envelope. But this is a "can" not a "must",
because the program is freeware.

At the same time you will get the newest version of QUICKSAMPLER, when
you have put a disk into an envelope, and you become a registered
user.

1.13   COPYRIGHT NOTE and DISCLAIMER

3.2 COPYRIGHT NOTE and DISCLAIMER

The program-packet consists of:
documents: "QUICKSAMPLER_E.guide", "QUICKSAMPLER_E.doc"
           "QUICKSAMPLER_D.guide" and "QUICKSAMPLER_D.dok"
program: "QUICKSAMPLER"

QUICKSAMPLER is Copyright ©~1996/1997 by Mario Kubek
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QUICKSAMPLER_D.dok is Copyright © 1996/1997 by Mario Kubek

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program "QUICKSAMPLER" and for all the documentations to the executable.
All rights reserved.

It may be distributed freely as long as
no modifications are made to the executable and the documents. A small
fee may be asked to cover distribution costs.

QUICKSAMPLER may not be used for any commercial purposes or included
with any commercial product without the written permission of the author.

The author can not guarantee, that the program will function on your
computer.
The author takes NO responsibilities for damaged Amigas, CD-ROM drives
or any other components or data involved while using QUICKSAMPLER or
while using the documentations.

Your are using it at your own risk.
There is no guarantee for further updates. There is also no
guarantee, that bugs are removed in them.

The program-packet is also free of rights of third persons.

NOTE: In almost all cases it is NOT legal to copy any CD.
      That includes, that no digital audio data are read from a CD.
      Though you own the CD you do not own the rights for the CD.
      Please do NOT violate existing rights. You are responsible for
      it.

1.14 THANKS

4. THANKS

Thanks must go to:

- Thomas Wenzel for his great program Play16!

- TOSHIBA for the best und fastest CD-ROM drives!!!

- MAXON for the great C++ Compiler MaxonC++ 4.0 Dev. Professional.
  MaxonC++ is Copyright ©~1996 by MAXON Computer GmbH.

- Phase 5 for the fastest turboboards and SCSI-Controllers for the
  AMIGA.

- Malcolm Harnden for the five great five CDs