

StoneTracker

Emmanuel MARTY LAVAIRE

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Chapter 1

StoneTracker

1.1 StoneTracker V1.25

StoneTracker V1.25

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Emmanuel MARTY & Michael LAVAIRE

Introduction	Introduction to StoneTracker
What's new ?	For users of version 1.22
Installation	Installation on your harddisk
Disclaimer	Important legal notes
Requirements	Hardware requirements
Authors & Distributor	About StoneTracker makers and distributor
About D-Stroy...	Decrease your productivity
Thanks	To people that helped us
Basic principles	Basic principles for trackers
StoneTracker features	What makes StoneTracker different
Using StoneTracker	Practical use of StoneTracker
AREXX	About StoneTracker AREXX port
Developers	Developer material
External software	Provided external software
Appendix	Quick reference to important parts

1.2 Introduction

StoneTracker V1.25

Welcome to the electronic distribution of StoneTracker demonstration version.

StoneTracker is a tool enabling you to create music, either for your own pleasure or in order to use it in an application. Assuming some knowledge of the use of Amiga and basics of music, this document covers the basics of tracker composing, practical use of the program and inclusion of StoneTracker

music into your personal applications.

In order to achieve this level of quality, we have been working on this tool for one year and a half.

StoneTracker stands for :

- one year and a half of work dotted with exams
- 1210 KB of sourcecode, fully written in Assembler language
- An A1200 and an A4030 knocked dead
- 600 liters of Coca-Cola
- About ten disagreements

The main features are :

- System friendly, OS 2.0 look (with our personal touch of course), no enforcer hit!, installs as commodity, AppIcon, AppMenuItem... Allocates channels, can deallocate without quitting. Compatible with VGA/Multisync etc. screens. Gets the best from the Amiga and puts you in a secure environment.
 - Locale support. English and French currently; German planned. Any translator is welcomed.
 - "Everything on screen" and ergonomic user interface, studied with a tracker musician. Secure against unwished operations..
 - full-featured AREXX port
 - Extreme configurability.
 - Noise/ProTracker keyboard shortcuts emulation.
 - Custom module format, allows compression of sample banks with three different and dedicated methods.
 - Import of 13 existing formats (e.g. ProTracker, FastTracker, OctaMed, Oktalyzer, ThePlayer...)
 - Export of ProTracker and FastTracker formats in addition to its own format (full version only)
 - XPK support. Passwords handled.
 - XFD support (allowing decrunching of more than 100 packers, like CrunchMania, StoneCracker...).
 - Builtin decompression routines for Powerpacker and CrunchMania (if XFD is not available).
 - Multi-song (65.535 possible)! Available song-synchro commands in the player for interactive music.
 - Up to 65.535 patterns!, shared between songs.
 - Patterns seperated for each track, allowing you e.g. to reuse a beat or a bass line from a position to another !
Command for "remapping" duplicate patterns in imported
-

- modules that haven't this feature (ex. ProTracker) saving a lot of memory!
- Up to 255 samples! Can be loaded in FAST memory : no size limit except the size of your fastmem.
 - 4 ("native") tracks or 5,6,7,8 tracks, all with configurable mixing quality, from 4 to 50 Khz (28 Khz on PAL/NTSC "basic" displays). All effects can be used in all modes, no restrictions! Mixing technique is more like TFMX than OctaMed or ArtOfNoise resulting in high quality sound. Each song can have its own number of tracks, and you can jump from e.g. one song in 4 tracks to one in 7 without hearing a noise or whatever!
 - Each track has its own volume. General volume for the music. Master volume on top of all controlled by the programmer.
 - Up to SEVEN effects per note per track!
 - Special "FX" track with up to EIGHT effects per line, dedicated to speed and general control commands.
 - Extended effects!
 - Effect for gearing your program to the music (calls a user function when this effect is reached). Ideal for game intros, demos, etc.
 - Command for MIXING a position into a sample ! Make your arpeggios, drums or whatever...
 - Command for timing a song; no need to play the whole song to know its duration anymore.
 - Highly optimized play and mixing routines.
 - Player is a shared library, used even by the editor!
 - AmigaGuide Documentation in English and French (German planned).
 - Nice example musics in 4 to 8 tracks, composed by Jérôme Angelot, the musician who helped us designing this tracker.
 - Provided Harddisk-installation Installer script.
 - Full developer documentation for player and fileformat, with examples in Assembler and C, link library for SAS; you can use the player library or include the player in your programs ("system friendly" and "no operating system" (for games and demos) versions provided) (full version only)
 - Players for DeliTracker and EaglePlayer and independant player (full version only)
 - Editor, player and packers fully programmed in Assembler.
-

- Constant support. Most user requests have been satisfied yet and we will continue to do so.

1.3 What's new ?

StoneTracker V1.25

Editor :

- [] Uses XPK for unpacking modules, when loading and joining. Passwords handled. At last it's possible to load 'squashed' modules !
 - [] Uses XFD for unpacking modules, when loading and joining. Passwords handled. Files packed with e.g. StoneCracker or Imploder can now be loaded.
 - [] Added ThePlayer 4.1A loader.
 - [] Added Art Of Noise 4/8 tracks loader.
 - [] Rewritten track display routines, both cleaner and faster.
 - [] Improved upwards compatibility with StonePlayer library.
 - [] Removed bugs :
 - disabled "Mix" button when sample 0 is active :)
 - when inserting a song, current position is brought back to the first.
 - repaired ThePlayer 6.x loader (samples packed with Fibonacci weren't unpacked any more)
 - now, underlined effects (indicating that there are effects before or after the underlined one) work on FX track !
 - avoided possible crash after a 'remap'
 - 'BPM' gadget refreshed only when required (it isn't any more when is executed a OFXX command which changes inter-line gap but not BPM)
 - added AppMenuItem parameter handling : it's now possible to select one or several icon(s) of module(s) and select "StoneTracker" in Workbench menus; This will have the same effects as dropping this (these) icon(s) on the AppIcon. Thanks Brice!
 - when tracker screen is hidden and one drops modules on the AppIcon, or selects some and selects "StoneTracker" in Workbench menus, it doesn't hang the system any more... Thanks Brice ;)
 - the tracker crashed when loading some ThePlayer 6.1A modules without identifier, taking them for 5.0A or 6.0A modules, almost identical but with a packing system utterly different : improved detection routine, which leads to a correct handling of these modules. Added too a security which in case of bad detection would load random things but wouldn't crash.
 - when one clicks with the mouse in patterns and cursor jumps to another line, the righthand slider is now moved. =:)
 - when you inactive the tracker (Inactive) and then you try to run the tracker again, it doesn't crash any more.
 - when you are in the config editor and you try to run the tracker again, it doesn't crash any more.
-

StonePacker library :

Created for version 1.25. This library includes all samplebank pack/unpack routines. Previously, these routines were included in the tracker, PlayStone, DeliStone and EagleStone, which was silly. Better sharing what can be shared ! In addition, this library removes all unexplained decompression problems that were noticed in these external players.

PlayStone, DeliStone, EagleStone :

Now use the new 'stonepacker.library' shared library : no decompression problems any more. A bit less memory required.

Player (StonePlayer library and binary players) :

- [] SoftInterrupt in "hardware" (no operating system) binary player is now handled in a transparent way.
- [] Song end wasn't detected in binary players when the end of last position was reached. Fixed.
- [] 09xx (Sample Offset) command now plays sample loop when offset>samplelen, in order to be compatible with crazy ProTracker modules (Thanks Loïc)
- [] 0Dxx (Break Position) and 0Bxx (Position Jump) commands have been debugged and now work with craziest ProTracker modules (Thanks Loïc ;)

1.4 XPK compressors handling

StoneTracker V1.25

XPK is a file compression standard developed by Urban Dominik Mueller and now used by a majority of applications. Roughly, this standard enables applications using it that would have data to pack, to avoid caring directly about compression but instead to delegate this task to an external entity, an XPK compressor. The developer is then freed from the work of writing a compressor, and the user can use brand new XPK compressors with applications that use XPK, without upgrading.

Currently, a lot of musicians seem to pack their ProTracker modules using XPK and we have been constantly asked to integrate it into StoneTracker, in order to load these packed modules; it's now done. When loading or joining a module, if XPK is installed on your system, it will be automatically used for loading and unpacking the module, provided that it is stored in XPK standard file format (used e.g. by XFH but not by DiskExpander). A completion indicator has been implemented mainly for slow compressors (ex. xpkSHRI). If a password is required, you will be asked for it.

It isn't possible to distribute the whole XPK package along with StoneTracker because of space and rights, and in order to follow authors wills, we won't distribute it partially. If you don't already have got it, this standard is quite easy to find, e.g. on Aminet, in util/pack directory.

1.5 XFD depack library handling

StoneTracker V1.25

XFD is a file depacking standard developed by Georg Hörmann. It consists of a set of libraries enabling depacking of more than a hundred formats (ex. CrunchMania, StoneCracker...). XFD is called by StoneTracker when loading and joining modules, in order to load modules, mostly ProTracker format, compressed in the most exotic ways. If a password is required, you will be asked for it. If XFD is not available, StoneTracker is able to unpack PowerPacker and CrunchMania files by itself.

If you don't already have got XFD system, it is quite easy to find, e.g. on Aminet, in util/pack directory.

1.6 Installation

StoneTracker V1.25

An installation script written for the now famous Commodore's Installer tool is provided, in order to ease StoneTracker hard disk installation. Under Workbench, you just have to double-click on installation script icon (available in both English and French, I bet you'll use the former one) and follow on-screens instructions. Unless you are a true novice, I advise you choose the 'expert' mode, so that the script will not do anything before you being asked first.

If you want to install StoneTracker yourself on your harddisk (if you are among people who like complexity), you should :

- . copy StoneTracker program and its trailer StoneIntro located on disk 1 wherever you want to put them, the best choice being an own directory.
 - . copy preferences file StoneTracker.prefs located on disk 1 to ENVARC: directory of your harddisk.
 - . copy shared libraries StonePlayer.Library and StonePacker.Library located on disk 1 to LIBS: directory of your harddisk (you may copy them to StoneTracker directory instead, but neither DeliStone or EagleStone will find them and will then refuse to operate)
 - . copy requester library reqtools.library (© Nico François) located on disk 1 to LIBS: directory of your harddisk.
 - . copy french locale file (if you ever need it) StoneTrackerDemo.catalog in locale:catalogs/français directory of your harddisk.
 - . copy example musics located in modules/ directory on disk 2 wherever you want to put them, the best choice being an own directory.
 - . copy one or both documentation files, StoneTrackerDemo.Guide (french) and StoneTrackerDemo_E.Guide (english :) located on disk 2 wherever you like
-

then modify "Multiview=..." line of StoneTracker.prefs file in order to setup documentation directory for StoneTracker.

- . an extra disk is provided with commercial version. This version features example sources, includes and linked library for 'C' development; includes, autodocs and example sources for Assembler development; players to be included in your own applications; players for DeliTracker and EaglePlayer; an independant player; and two trailers, which can be included in your apps too.

1.7 Disclaimer

StoneTracker V1.25

StoneTracker is provided to you "as is" without any warranty of any kind, either expressed or implied. Authors and other parts involved into the distribution of this software deny all responsibility for damage that this software may cause whatever it is. You are using this program at your own risk.

StoneTracker, sound routines (stoneplayer.library and binaries), the bank pack/unpack library (stonepacker.library), the linked library for 'C' (stoneplayer.lib), include files, external software (PlayStone, DeliStone, EagleStone) and all documentation are copyright 1995 Emmanuel MARTY & Michael LAVAIRE. Any modification whatever it is by any person or part other than us or any operation not explicitly allowed here on the files listed above is illegal. Copying demonstration version (which explicitly shows 'demo version' in a request at program startup time) is allowed (provided that all files making this demonstration version are distributed and under their original form, and that the person or part which distributes doesn't not ask for a price greater than the price of the media on which the software is distributed) and even encouraged. Copying and/or distributing commercial version (the full one, which lets you save data) is strictly forbidden, except for persons or parts having signed a distribution contract with authors.

All example musics are copyright 1995 Jerome ANGELOT. Any modification or reusing of these musics without written permission of their author is forbidden, either partially or fully, for commercial purpose or not.

StoneTracker Sound System picture is copyright 1995 Nicolas RIVIERE. Any modification or reusing, partially or fully, of this picture under any form, for commercial purpose or not (excepted an article or advertisement describing explicitly StoneTracker) is strictly forbidden without written permission of its author.

Any person breaking the rules listed above is exposed to legal proceedings from holder(s) of the copyright(s) which has been violated.

We allow Peter Kunath and Frank Riffel (DeliTracker programmers) to include "DeliStone" program into present and future distributions of their module player DeliTracker. The legal conditions applied to DeliTracker and its players will then apply to the "DeliStone" version distributed along with their software.

We allow Henryk Richter and Jan Blumenthal (EaglePlayer programmers) to include "EagleStone" program into present and future distributions of their module player EaglePlayer. The legal conditions applied to EaglePlayer and its players will then apply to the "EagleStone" version distributed along with their software.

Buying full version of this software grants you the right of using the "binaries" (StoneTracker sound routines that can be integrated into your applications), music composed on StoneTracker and/or stoneplayer.library into your applications, even commercial ones.

1.8 Requirements

StoneTracker V1.25

Powerful software needs powerful hardware... StoneTracker has been written from the start to run on the new generations (not very new now) of Amigas.

So running the StoneTracker and external software requires a 68020 CPU or better, and KickStart 2.04 (v37) or more recent (program does take advantage of OS 3.0 add-ons when it is present).

The program does not ask for AGA chipset (it would be stupid), that means that apart from Amiga 1200 and 4000, StoneTracker can e.g. be run on an Amiga 2000 with kickstart 2.04 and an accelerator board. Note however that the better architecture of AGA chipset enables a much faster screen refresh than original or ECS chipset, in 5-8 channels mode.

StoneTracker music editor and external software have been programmed and work fine on a multisync display, VGA or other. They work of course on "basic" PAL and NTSC displays.

1.9 Authors & Distributor

StoneTracker V1.25

Refer to the disclaimer for information on the copyrights and on what we allow and forbid.

Emmanuel MARTY Programmed the editor (StoneTracker), the foreign module formats importation routines, DeltaHuffman sample packmethod, the bank pack/unpack library (stonepacker library) and external software : PlayStone, DeliStone and EagleStone.

Michael LAVAIRE Programmed the soundroutines (stoneplayer library and players to be included in your programs), the StoneCruncher/Mickey sample packmethod, and the two

trailers.

Jerôme ANGELOT Composed all example musics.

Nicolas RIVIERE Traced "StoneTracker Sound System" picture.

Benoit SAINT-MOULIN Drawn MagicWB StoneTracker icon in a couple of hours.

You are encouraged to give us feedback! We do need your suggestions, bug reports and other :

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FRANCE	FRANCE

Or via e-mail : marty@crit2.univ-montp2.fr (Internet)

Exclusive StoneTracker 1.25 distribution in France has been granted by written contract to the truly dynamic team of :

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(auto recognition)

If you only own demonstration version and you would like to buy the full version, send 190 FF to the address above. You will be shipped the full version within a reasonable delay, even outside France. You can also contact them for getting their listing of what they distribute, or in order to have your creations distributed if you are developer.

Distributors outside France wanting to distribute StoneTracker in the country(ies) where they are located are highly invited to contact authors in order to get a written agreement.

1.10 Thanks

StoneTracker V1.25

Emmanuel :

[] Nicolas Rivière pour l'image de la mire StoneTracker, pour chanter des chansons débiles et me faire mourir de rire à longueur de journée.

[] Nicolas Daire pour avoir colorisé l'interface utilisateur du tracker et provoqué l'apparition de bugs incroyables.

[] Jérôme Angelot pour les idées et les musiques d'exemple.

- [] Brice Fromentin pour l'extension StoneTracker pour AMOS.
- [] Benoit Saint-Moulin pour l'icône 8 couleurs de StoneTracker, pour la réparation du 4000, pour le hardware supplémentaire, pour le sympathique séjour en Belgique et pour le job de rêve !
- [] Nico François for reqtools.library.
- [] Cyprien Benezet pour me faire mourir de rire depuis de longues années et pour les boîtes à con qui encombrent mon étagère.
- [] Patrick et Alban pour avoir pallié à l'absence de mon 4000 par un 1200 et une carte accélératrice.
- [] Zest00n pour se coiffer avec une éponge et MIPS pour vivre sous tranxène, et pour les deux utiliser leur talent d'infographistes pour égayer les productions Christophe Clark.
- [] Fanny pour avoir été ma coiffeuse et mon photographe personnel à la GASP et pour avoir gagné le premier prix du concours d'originalité rubrique enveloppes.
- [] R.J. Mical, system developer, Jay Miner, hardware creator, and all other fathers/mothers of the Amiga for having invented the use of computers for pleasure instead of constraint.
- [] All users that have sent us suggestions for StoneTracker. Be thanked all.
- [] Anybody that I met at the GASP who isn't mentioned here.

Michael :

- [] Nicolas DAIRE pour son soutien et sa facheuse tendance à trouver les bugs où il n'y en a pas.
- [] Jérôme ANGELOT pour les essais du StoneTracker et sa connaissance de la musique.
- [] Bruno MILLION pour avoir soutenu Jérôme.
- [] A Chapter 8 pour les idées de projets ...
- [] Ma soeur pour me frapper quand je fais des fautes d'orthographe.
- [] Et à tous ceux que j'ai oublié mais qui m'ont soutenu pendant cette dure année de travail.

1.11 About D-Stroy...

StoneTracker V1.25

About D-Stroy...

A Shareware game featuring music composed by Jérôme ANGELOT (author of the example musics) on the StoneTracker will be finished in October both on PC and Amiga... It reuses Bomber Man (DynaBlaster) game principles but with loads of new ideas, monsters using artificial intelligence algorithms, 256 colors delirious graphics (example : vampires, dwarfs, flowers...), StoneTracker musics, loads of levels, options, stoopid secret codes, total configurability, up to 4 players on a single machine or by null-modem (possible between PCs, Amigas and PC/Amiga). Fully programmed in assembler both on PC (386 code, 32-bit protected mode, requires a SVGA card which is VESA compliant too) and Amiga (68020 code, AGA required).

PC Code : André RIEUSSEC (game)
 David GALLO (level editor, compression, sound routines)
 Adam Seychell (DOS32 DosExtender)
Amiga code : Emmanuel MARTY (game & StoneTracker editor)
 Michael LAVAIRE (sound routines & compression)
Graphics : Nicolas RIVIERE
Musics : Jérôme ANGELOT

Along with the StoneTracker is distributed an information text written by game instigator, Nicolas RIVIERE.

1.12 Présentation de D-Stroy ...

FULLY BUGGED SOFTWARE

D. STROY

* PRESENTATION *

Hi...!

Fully Bugged Software proudly present you their first game : D-STROY.
This game has been made only for fun that player(s) will have, playing a nice little game.

Available this summer on P.C., this game will be converted to Amiga 1200 by Emmanuel Marty, co-developer of STONE TRACKER !
P.C version also includes a translation of STONE TRACKER sound routines, and musics will be composed by Jerome Angelot, whose example musics are distributed along with StoneTracker !

D-STROY P.C. and AMIGA will be "compatible" and you will be able to link 2 machines in order to play with your friends (1 to 4 players).

D-stroy will be soon available in SHAREWARE version almost everywhere,
DON'T MISS IT !

For further information, write to :

P.C. Version

F.B.S.

Amiga Version.

Emmanuel MARTY

Nicolas Riviere
8 Rue Des Hospices
34090 Montpellier

10 Impasse du Romarin
34920 Le Crès
(marty@crit2.univ-montp2.fr)

I hope you will like the 2 versions,
And thank you, Friend from the Other Side,
For your Attention !

BAT.

1.13 Basic principles...

StoneTracker V1.25

What is a tracker ?

A tracker is a program dedicated to handling the sound of your machine, in order to handle, organize and shape sounds to get the wanted effect, which is often a music. Editing a partition of a music is done most of the times note by note, that means that you enter one after another the notes making your symphony.

This partition is divided in beats, which are called patterns in trackers terminology, and which are actually two-dimensional "arrays" of equal size, made out of lines (as many as there are tracks possible, or if you prefer, sounds played simultaneously), and columns which can be filled with the notes to be played on each track. The tracker plays the notes sequentially, one after another, at a rate given by the musician, and which is represented by the BPM (Beats per minute). Patterns are played in a given order which is defined by the composer, enabling e.g. to repeat the chorus.

The notes making the music are of course not enough to output a sound. They must be associated an instrument, or sample. Trackers use the native method for outputing sounds on the Amiga, "sampled" intruments, that means instruments from which a note has been played by a real instrument then converted into numbers that the Amiga can understand, by using a sampler. The tracker then asks the machine to output the sound back and can mimic the whole scale given a single note. All natural sounds can then be "sampled" and used in a music composed on a tracker, either instruments, noises, or even voice, which can give this method a great realism. At a, say, professional level, this technique is used to compose todays dance-music hits...

Coming back to our lower level, we have a true small digital multitrack recorder, with, on the most part of clones of the first Amiga tracker (SoundTracker by Karsten Obarski, people tend to forget him), four tracks available (that means that four sampled sounds can be played in the same time, a rule imposed, even if workarounds now exist, by the Amiga hardware... One will sometimes have to trick a bit, having e.g. instruments for chords), and a single effect associated to each note, which is actually a command acting on sound properties (speed, sound volume, etc. but also vibrato, tremolo, crescendo, decrescendo...)

In order to ease your work, the keyboard of your favorite machine is transformed into a true synthetizer keyboard able to play 3 scales :

So, for example, for the first scale:

	dol#	rel#		fal#	soll#	lal#
dol	rel	mil	fal	soll	lal	sil

Translate on your keyboard to :

	S	D		G	H	J
W	X	C	V	B	N	,

Which finally translates on the editor to:

	C1#	D1#		F1#	G1#	A1#
C1	D1	E1	F1	G1	A1	B1

Indeed, nowadays, almost all trackers use this textual USA notation, which even if arbitrary is more compact so fitting for representing notes on a screen where space is limited, and where the number of "tracks" displayed side by side is constantly increasing. Only some courageous minds keep on proposing stave notation, which is more natural to a musician but less practical for a tracker, where sound handling methods are totally different from the ones used in its "big brothers", MIDI tools. But the two kinds of software do not aim the same goal. Trackers are oriented towards interactive and realtime applications, where MIDI tools are written for "professional musicians".

As described earlier, a tracker pattern shows up like this :

	Track 1	Track 2	Track 3	Track 4	...
00	C-1 010000	--- 000000	--- 000000	--- 000000	
01	---	000000	--- 000000	--- 000000	--- 000000
02	---	000000	--- 000000	--- 000000	--- 000000
03	---	000000	G#2 0F0482	--- 000000	--- 000000
:	:	:	:		
.	.	.	.		
.	.	.	.		

and this for as many lines as the beat has, each being able to hold a note and an effect. We can also notice that lines are numbered starting with 0. To the right of C1 note, on line 00 of first track, is written number 01. This is sound sample assignation, that means that C1 note will be played with sound sample numbered 01 in sound samples list. The numerous effects that can be applied to each note are entered too as number at edition time. So, at line 03, track 2, sol # note of scale 2 or G2# in USA notation will be played by instrument 0F that means in

hexadecimal notation instrument 15 of thesamplebank. This note will be applied an effect : this is effect 04xx applying a vibrato to the sound. "x82" is the effect parameter, here vibrato, which in this precise case stands for is depth... But we will see this deeper in effects part.

1.14 Glossary

StoneTracker V1.25

tracker music composing program based on sequential output of sampled sound, on several sound tracks (channels) in the same time.

track voice, channel, etc. for outputting a single sampled sound at a given moment.

pattern beat. "grid" which contains a given number of notes (the same for all patterns) to be played sequentially. on traditional trackers, a pattern does hold notes for all tracks. on StoneTracker, a pattern holds notes for one track only.

position the position list tells for each beat, which pattern is to be played (on traditional trackers) or which pattern to be played on which voice (on the StoneTracker).

song on StoneTracker (this notion doesn't exist on traditional trackers) represents the definition of the position list, the number of tracks and the BPM (see below). The patterns being shared on the program by all songs, you can create different position lists and so compose several songs with the same instruments and even reuse patterns (as they hold notes for one track only, you can e.g. reuse a drum beat or a bass line).

sample computer (digital) representation of the variation of tension that characterizes a real sound, permitting the computer and the tracker to reproduce this variation back, making a quite realistic sound.

sampling action consisting of creating a sample from a real sound.

module "supreme entity", your whole music. includes all songs (so all positions), all patterns and all instruments. anything that you can create on StoneTracker can be found in the module.

timing Two factors are considered for the speed of music reproduction : the timing between lines and the BPM (see below). The timing between lines is the amount of time that StoneTracker waits before playing the

next line of the pattern. The greater this number, the slower the music. Normal speed is 6. It ranges from 1 (fastest speed) to 31 (slowest speed). You can refer to Set Speed effect.

BPM Beats per minute. The second factor determining the speed of music reproduction. This is the music "tempo". Its normal speed is 125 (7D in hexadecimal). It ranges from 32 so 20 hexa (the slowest) to 255 so FF hexa (the fastest). You can refer to Set Speed effect.

1.15 USA Notation

StoneTracker V1.25

USA Notation :

C Do
D Ré
E Mi
F Fa
G Sol
A La
B Si

1.16 Hexadecimal notation

StoneTracker V1.25

Hexadecimal notation, widespread on computers, is a number basis different from decimal basis. In this basis, there are not ten digits like in decimal system but sixteen, symbolized by digits from 0 to 9 and letters from A to F for representing the rest of the digits. Traditional integer operations still work with hexadecimal and keep their properties. So, the same as $20-1=19$ in decimal, $20-1=1F$ in hexadecimal. One may wonder at first where is the point in using such a notation ; there are a lot of advantages. Apart from its intimacy with inner machine operations, it enables to write numbers with most of the times less digits than decimal notation. So, one can with two digits write numbers 00 to FF which translate to decimal 000 to 255 (which requires three digits). Experience will show you that hexadecimal numbers are easier to remind maybe by their reduced number of digits, which reveals pretty handy if you use a lot of instruments and don't want to spill your time searching for their number or if you would like to not being again and again reading effects list to search for their number too. In addition, some numbers involved in music composing, become "round". For example, engineers which have created Paula sound circuit have defined volume levels ranging from 0 (silence) to 64 (full volume). In hexadecimal, it becomes 00 to 40. Increasing volume "by hand" could then be translated in decimal and hexadecimal as following :

decimal	hexadecimal
0	0
8	8
16	10
24	18
32	20
40	28
48	30
56	38
64	40

Hexadecimal looks simpler, this time... Let's end with some example operations in hexadecimal :

operation	result
5 + 5	A
10 - 1	F
28 + 28	50
2C + 2A	56
55 * 2	AA
40 / 2	20
50 / 2	28

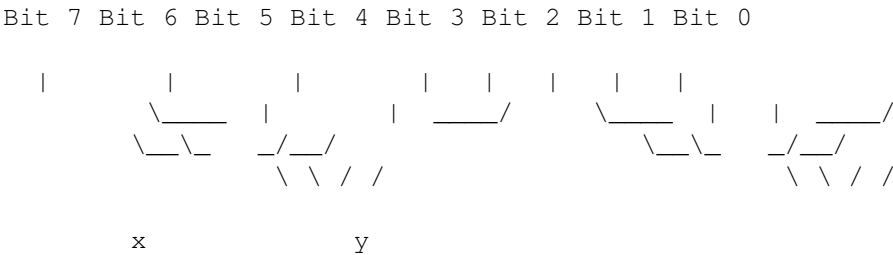
1.17 Binary notation

StoneTracker V1.25

Binary notation, as hexadecimal, has an high intimacy level with the machine inner operations. All internal operations of the CPU are performed in binary.

As its name says, the 'bi' from binary means 2. Contrary to hexadecimal, this number basis has only two digits, 0 and 1, called 'bits'.

Any parameter related to an effect, is made out of two hexadecimal digits. These two digits make a byte which is made out of eight bits. So for each hexadecimal digit, there are four bits.



The following tables shows you the conversion of four binary bits to a digit in hexadecimal basis, and vice-versa.

Binary	Hexa	Binary	Hexa
--------	------	--------	------

0000	0	1000	8
0001	1	1001	9
0010	2	1010	A
0011	3	1011	B
0100	4	1100	C
0101	5	1101	D
0110	6	1110	E
0111	7	1111	F

Example :

Bit 7 Bit 6 Bit 5 Bit 4 Bit 3 Bit 2 Bit 1 Bit 0

0 1 0 1 1 1 1 0

5 E

1.18 AREXX

StoneTracker V1.25

AREXX is the Amiga porting of REXX language. It would only be a kind of primitive BASIC if it hadn't got a faculty which is more or less its reason of being, the ability of controlling other applications supporting it and which are running in the same time as the AREXX program. These applications offer to the programmer a given number of specific commands by the means of an AREXX port. One can then automate by programming repeated operations. We will not go deeper here, the goal being not give you a full lesson of this powerful language. If you're not used to programming in AREXX, you are invited to read the literature which exists about it.

StoneTracker owns an AREXX port called 'StoneREXX'. It handles all required commands for program "remote control" :

GET	Gets the value of a parameter
SET	Sets the value of a parameter
ACTIVATE	Moves program screen to the front
ACTIVE	Reactivates the program
APPEAR	Makes screen appear
CLEAR	Clears pos,songs,patterns or samples
CONTINUE	Plays music from current location
DISK OPTIONS	Shows disk options
EDIT	Activates/deactivates edition mode

EXPORT MODULE	Exports current module
FILEREQUEST	Displays a file requester
FLUSH SAMPLES	Reorganizes the samples
HIDE	Hides program screen
INACTIVE	Makes program inactive
INFO	Displays information requester
JOIN MODULE	Fuses a module with the current one
LOAD MODULE	Loads a module
LOAD SAMPLE	Loads a sample/a samplebank
LOCK INTERFACE	Locks user interface
MAIN	Shows main menu
NULL	Clears the pattern under the current track
PLAY	Starts playing the music
PRINT SONG	Prints a song/all songs
QUIT	Quits the program without confirmation
RECORD	Starts recording notes
REMAP PATTERNS	Reorganizes patterns
REQUEST	Displays a requester
SAVE BANK	Saves current samplebank
SAVE CONFIG	Saves current configuration
SAVE EXEC	Saves an executable module
SAVE FX	Saves sound effects
SAVE MODULE	Saves current module
SAVE SAMPLE	Saves current sample
SHOW	Makes appear/moves to front editor screen
STOP	Stops playing the music
TIME SONG	Returns current song duration
UNLOCK INTERFACE	Unlocks user interface
UPDATE	Saves module modifications

1.19 GET

StoneTracker V1.25

GET <parameter>

Gets the wanted parameter into result.

1.20 SET

StoneTracker V1.25

SET <parameter> <value>

Sets the wanted parameter to the given value.

1.21 AREXX-controlled parameters

StoneTracker V1.25

AREXX-controlled parameters :

CURRENT SONG Song currently edited (decimal, 1-n)
 CURRENT POSITION Position currently edited (hexa, 0000-nnnn)
 CURRENT LINE Line currently edited (hexa, 000-nnn)
 CURRENT TRACK Track currently edited (decimal, 1-8)
 CURRENT NOTE Note under cursor (decimal, 0-35 for --- to B-3)
 CURRENT SAMPLE NUMBER Sample currently selected (hexa, 00-FF)
 CURRENT SAMPLE Sample under cursor (hexa, 00-FF)
 CURRENT COMMAND NUMBER Command displayed by current track (decimal, 0-7)
 CURRENT COMMAND Command under cursor (hexa, 0000-59FF)
 CURRENT PATTERN NUMBER Pattern linked to current track (decimal, 0-65535)
 MODULE NAME Module name :) (ascii)
 SONG NAME Name of currently edited song (ascii)
 SAMPLE NAME Name of sample currently selected (ascii)
 SAMPLE LENGTH Length of currently selected sample (decimal)
 SAMPLE REPEAT POINT Repeat point of currently selected sample (decimal)
 SAMPLE REPEAT LENGTH Repeat length of currently selected sample (decimal)
 SAMPLE VOLUME Volume of currently selected sample (hexa, 00-40)
 SAMPLE FINETUNE FTU of currently selected sample (decimal, -16 to +15)
 MODULE CHANGED Module modified or not (decimal, 0=no or 1=yes)
 SAMPLES CHANGED Samplebank modified or not (decimal, 0=no or 1=yes)
 FX ACTIVE FX track active or not (decimal, 0=no or 1=yes)
 BPM BPM of currently edited song (decimal, 32-255)
 TRACKS Track nb of currently edited song (decimal, 1-8)
 MAXTRACKS (1) Max track nb of currently edited song (decimal, 1-8)
 SONGS (1) Song count in current module (decimal, 1-x)
 PATTERNS (1) Pattern count in current module (decimal, 0-65535)
 FX PATTERNS (1) FX pattern count in current module (decimal, 0-65535)
 PATTLEN Pattern len of currently edited song (hexa, 000-nnn)
 MAXPATTLEN (1) Max pattern len of curr. edited song (hexa, 000-nnn)
 FREQUENCY 5-8 Track freq of current module, KHz (decimal, 4-50)
 STATUS Contents of titlebar (ascii)
 AUTHOR Author name in "Ego Area" (ascii)
 LEGAL Legal notes in "Ego Area" (ascii)
 COMMENT Comment about module in "Ego Area" (ascii)
 MODULE PACKER (2) Samplebank packer when saving module (3)
 BANK PACKER (2) Samplebank packer when saving samplebank (3)
 BREAK NULL (2) Stops player if speed is null (decimal, 0=no/1=yes)
 KEY REPEAT (2) Repeat keys in edition mode (decimal, 0=no/1=yes)
 IFF SAMPLES (2) Saves IFF samples (decimal, 0=no/1=yes)
 FULL LOCK (2) Locks editor when inactive (decimal, 0=no/1=yes)
 PRINTER PATH (2) Printer path, e.g. "PRT:" (ascii)
 PAGE HEIGHT (2) Printer page height (decimal, 1-n)
 FAST MODE (2) Sample FastRam loading mode (4)
 FAST SIZE (2) Size in KB for FastRam samples loading (decimal, 1-n)

(1) : Read only.

(2) : modifies configuration if written (if any of these parameters is changed and config is resaved by SAVE CONFIG then modifications will be saved). cannot be written while configuration editor is running.

```
(3) : decimal, 0 : no packer
      1 : DeltaHuffman packer
      2 : CrunchMania/LZH+Delta packer
      3 : StoneCruncher/Mickey packer
(4) : decimal, 0 : never
      1 : if samplesize >= FAST SIZE
      2 : if free chip memory <= FAST SIZE
```

1.22 ACTIVATE

StoneTracker V1.25

ACTIVATE

Makes editor screen come to front if it is open.

1.23 ACTIVE

StoneTracker V1.25

ACTIVE

Reallocates audio channels and, if allocation succeeds, reactivates the program.

1.24 APPEAR

StoneTracker V1.25

APPEAR

Reopens editor screen (if possible).

1.25 CLEAR

StoneTracker V1.25

CLEAR [POSITIONS|SONGS|PATTERNS|SAMPLES|SAMPLE]

```
POSITIONS : Clears all positions in current song
SONGS      : Clears all songs
PATTERNS   : Clears all patterns (so all songs)
SAMPLES    : Clears all samples
SAMPLE     : Clears currently selected sample
```

1.26 CONTINUE

StoneTracker V1.25

CONTINUE

The same as PLAY SONG CURRENT.

1.27 DISK OPTIONS

StoneTracker V1.25

DISK OPTIONS (ou DISK OPT.)

Display disk options page.

1.28 EDIT

StoneTracker V1.25

EDIT [ON|OFF]

ON: Enables edition mode

OFF: Disables edition mode.

without parameter, toggles between the two.

1.29 EXPORT MODULE

StoneTracker V1.25

EXPORT MODULE <name>

Exports current module, either in ProTracker (4 tracks), in FastTracker 6 tracks (5/6 tracks), or in FastTracker 8 tracks (7/8 tracks).

name: filename (ascii)

Return code: RC=0 if ok, 1 if error.

1.30 FILE REQUEST

StoneTracker V1.25

FILEREQUEST <MODULE|SAMPLE|DEFAULT> [SAVE]

Displays a file requester.

MODULE : uses path and current name for modules.
SAMPLE : uses path and current name for samples.
DEFAULT : uses default path and name.
SAVE : warps requester in "save" mode :
double-click disabled and directory creation
enabled (see ReqTools documentation).

Puts full name in result if all has gone well.

Return code: RC=0 if ok, 1 if error (cancel).

1.31 FLUSH SAMPLES

StoneTracker V1.25

FLUSH SAMPLES [UNUSED] [REMAP]

Reorganizes samples

UNUSED : Clears samples not referenced in patterns
Clears data after loops
REMAP : Removes empty slots between used slots

1.32 HIDE

StoneTracker V1.25

HIDE

Closes editor screen while leaving program active.

1.33 INACTIVE

StoneTracker V1.25

INACTIVE

Frees audio channels and makes program inactive.

1.34 INFO

StoneTracker V1.25

INFO

Displays information requester.

1.35 JOIN MODULE

StoneTracker V1.25

JOIN MODULE <name>

Fuses a module with currently loaded module, adding its songs and its patterns next to the ones in memory, and loading samples in "MAP" mode (eliminates twins). If it's a module to be imported the name has no restrictions. If it's a StoneTracker module, the name after the path begins by "SPM.", like for LOAD MODULE.

name: filename (ascii)

Return code: RC=0 if ok, 1 if error.

1.36 LOAD MODULE

StoneTracker V1.25

LOAD MODULE <name>

Loads a new module into the editor.

If it's a module to be imported name has no restrictions.

If it's a StoneTracker module, the name after the path begins with "SPM." like for JOIN MODULE.

name: filename (ascii)

Return code: RC=0 if ok, 1 if error.

1.37 LOAD SAMPLE

StoneTracker V1.25

LOAD SAMPLE <name>

Loads a sample in current slot/a samplebank.

name: filename (ascii)

Return code: RC=0 if ok, 1 if error.

1.38 LOCK INTERFACE

StoneTracker V1.25

LOCK INTERFACE

Locks user interface and puts a busy pointer (if editor screen is opened). Editor keeps on answering AREXX and Commodity messages.

1.39 MAIN

StoneTracker V1.25

MAIN

Display main menu.

1.40 NULL

StoneTracker V1.25

NULL

Clears pattern under current track.

1.41 PLAY

StoneTracker V1.25

PLAY [SONG|PATTERN] [TOP|CURRENT] [RESTART]

Starts playing the music.

SONG : plays the whole song (default)
PATTERN : loops on current position
TOP : starts from patterns top (default)
CURRENT : starts from current line
RESTART : starts from song start

1.42 PRINT SONG

StoneTracker V1.25

PRINT SONG [ALL]

Prints current song or all songs if "ALL" is added.

1.43 QUIT

StoneTracker V1.25

QUIT

Quits program without requester.

1.44 RECORD

StoneTracker V1.25

RECORD [SONG|PATTERN] [TOP|CURRENT] [RESTART]

Records notes while playing the music.
Options similar to PLAY.

1.45 REMAP PATTERNS

StoneTracker V1.25

REMAP PATTERNS

Reorganizes patterns by eliminating twins.

Return code: RC=0 if ok, 1 if error.

1.46 REQUEST

StoneTracker V1.25

REQUEST <title> <body> <gadgets>

Displays a requester.

```

title:    requester title.
body:     text in the requester (char 10 for new line)
gadgets:  gadgets to select seperated by '|', EasyRequest() style.
          example: "Ok|Cancel", "Resume"...

Return code :
    result = "0" if rightmost gadget (normally cancel gadget)
    (or the only gadget) is selected, if not, "1", "2" , etc.
    for the other gadgets.
example: "Yes|Maybe|No". Returns: 1,2 or 0 respectively.

Note:
    The three arguments must be surrounded with apostrophes plus inner
    quotation marks, because of the way AREXX handles commands.
    Example: '"Telephone home"'.
```

1.47 SAVE BANK

StoneTracker V1.25

SAVE BANK <start> <stop> <name>

Saves current samplebank.
 You are highly adviced to have the name after the path start
 with "SPS."

```

start : slot number of start sample (hexa)
stop   : slot number of end sample (hexa)
nom    : filename of the samplebank to create (ascii)
```

Return code: RC=0 if ok, 1 if error.

1.48 SAVE CONFIG

StoneTracker V1.25

SAVE CONFIG

Saves editor configuration (of which several parameters
 can be changed by AREXX – see functions GET and SET).

Return code : RC=0 if ok, 1 if called as configuration editor is
 active (so not from StoneTracker AREXX menu...)

1.49 SAVE EXEC

StoneTracker V1.25

SAVE EXEC <name>

Saves current module as an executable program.

name: filename (ascii)

Return code: RC=0 if ok, 1 if error.

1.50 SAVE FX

StoneTracker V1.25

SAVE FX <name>

Saves patterns in a module without song (for using as sound effects - see player documentation).

The name after the path must begin with "SPM."

name: filename (ascii)

Return code: RC=0 if ok, 1 if error.

1.51 SAVE MODULE

StoneTracker V1.25

SAVE MODULE <name>

Saves current module.

The name after the path must begin with "SPM."

name: filename (ascii)

Return code: RC=0 if ok, 1 if error.

1.52 SAVE SAMPLE

StoneTracker V1.25

SAVE SAMPLE <name>

Saves current sample in a file.

```
name: filename (ascii)
```

```
Return code: RC=0 if ok, 1 if error.
```

1.53 SHOW

```
StoneTracker V1.25
```

```
SHOW
```

```
Opens editor screen (if possible).  
Makes it go to the front if it's already opened.
```

1.54 STOP

```
StoneTracker V1.25
```

```
STOP
```

```
Stops playing music.
```

1.55 TIME SONG

```
StoneTracker V1.25
```

```
TIME SONG
```

```
Computes song duration and returns time in seconds in result.  
NOTE: stops playing music if it was playing.
```

1.56 UNLOCK INTERFACE

```
StoneTracker V1.25
```

```
UNLOCK INTERFACE
```

```
Unlocks user interface (if editor screen is opened).
```

1.57 UPDATE

StoneTracker V1.25

UPDATE

Resaves module under its name.

Updates only what has been changed, either the partition (SPM),
the samplebank (SPS), or both.

Return code: RC=0 if ok, 1 if error.

1.58 Using StoneTracker

StoneTracker V1.25

StoneTracker 1.25

```
-----
|Position|PlaySong
PlayPos
  Stop
  Record
Continue|Frequency | MonoScope |
| Clear |   Edit
  Clear
AREXX
Inactive
  Hide |           |
| Edit |   Help
DiskOp.
  Config
  Info
  Quit |   24 Khz |
-----|           # |
| Song |   Samples |Mix
Flush
Pick
Delete
Clear|-----|
|<
  1
>| < >   Name   Len <> Rep <   0> Vol <40>| ChannelMeters | Cmd |
| Pick |   01 Bass 01 41200 Len <   0> FTU < 0>|" Link InterMasterVolume}| ←
      |@{|
| Clear |-----| |           |Prev|
| Edit | Song name   : From the future ... | |           |Edit|
| Time | Module name : Cool baby II         |Patt :Clear
Edit
Remap|
-----
| BPM <125> Tracks <4> PattLen <40> FX | Pat:... Bank:... Time:... |
-----
|12|           5 |           2 |           13 |           1 |           5 |^v|
-----
```



```
|POS|      Track 1      |      Track 2      |      Track 3      |      Track 4      | FX | "  ↵  
Link InterLedState} |
```

1.59 Play Song

StoneTracker V1.25

Play Song starts playing the music from the top of current position.

1.60 Play Pos

StoneTracker V1.25

Play Pos starts playing the music and loops on current position.

1.61 Stop

StoneTracker V1.25

Stops playing the music and shuts down audio outputs.

1.62 Record

StoneTracker V1.25

Enters record mode : notes can be entered while the music is playing. This can be performed playing the whole song or looping on current position, depending on what mode was used last time music has been played :

- . if looped on current position, StoneTracker will record looping on current position.
- . if played the whole thing, StoneTracker will record playing the whole thing.

1.63 Continue

StoneTracker V1.25

Starts playing music from current position and current line.

1.64 Clear Position

StoneTracker V1.25

Removes all positions from current song (after you confirmed) and creates a new one with pattern number for each track set to 0.

1.65 Edit Pattern

StoneTracker V1.25

Puts StoneTracker in pattern edition mode.

1.66 Clear Pattern

StoneTracker V1.25

Clears current pattern.

1.67 AREXX

StoneTracker V1.25

Shows up AREXX macro call menu.

1.68 Inactive

StoneTracker V1.25

Deactivates the tracker and deallocates audio channels.

1.69 Hide

StoneTracker V1.25

Closes tracker screen. Opening it again can be done either by Hot Key (tracker calling key sequence), commodities exchange or by double-clicking on StoneTracker AppIcon under Workbench.

1.70 Help

StoneTracker V1.25

Calls this help file from StoneTracker.

1.71 Information

StoneTracker V1.25

Displays information about author and user.

1.72 Quits the StoneTracker.

StoneTracker V1.25

Quits the StoneTracker after you confirmed.

1.73 Output frequency

StoneTracker V1.25

Select here the track mixing frequency for modes different from standard 4-tracks. If CPU is overloaded (has too much to compute), frequency will slide down automatically.

If you're the lucky owner of a multisync screen, mixing frequency will have a maximum of 50 KHz, if not 28 KHz.

1.74 Mix current position

StoneTracker V1.25

This function enables you to create a sample from current position. It can be used to generate chords or drum beats.

To do so, set the number of tracks required for your rythm (for example). Then set up notes and effects. You can listen to what you'll get by sending a Play Pos.

As soon as the rythm (for example) sounds fine, select the sample to be filled with the position mix. Then press Mix button. A requester will pop up asking you which note you want to mix on and which volume to use. Volume is here to get rid of possible saturation. At a volume of 64 the sample will have the same volume as the mixed position.

1.75 Flush Samples

StoneTracker V1.25

After several hours of intense creation, you have loaded a lot of samples into the memory of your computer. Using this function, you will remove unused samples and cut off the end of looping samples which is never played.

As soon as this has been done, StoneTracker will ask you if you want to group samples together. For example if samples numbered 1 and 3 are used but sample 2 isn't, after "Flush Samples" first pass, sample 2 will be deleted away from memory. Then, if you choose to let the program do its second pass, sample 3 will become sample 2, both in samples list and in patterns (and the same for all empty sample slots), so that no empty slot will be let between used slots.

1.76 Pick Sample

StoneTracker V1.25

Pops up a requester with the list of all samples, that lets you choose a sample very quickly from the all available samples.

1.77 Deletes current sample

StoneTracker V1.25

Deletes current sample from memory after confirmation.

1.78 Deletes all samples

StoneTracker V1.25

Deletes all samples from memory after confirmation.

1.79 Changes current song number

StoneTracker V1.25

This button changes current song number. If the tracker is not playing the music, it instantly jumps.

On the other hand, if the tracker is currently playing, it will jump to the wanted song only when current position ends. This is truly useful to test synchronization between songs. When the tracker is waiting for the end of current position, if you press the button again, it will immediatly jump to the wanted song.

1.80 Current song number

StoneTracker V1.25

Shows current song number, or the song number to which the tracker will jump when current position ends.

The same as when you press <
> you can test song
synchronization.

1.81 Sample loop point

StoneTracker V1.25

Shows sample loop point in bytes. The smaller the number, the closer to the start of the sample. So, the bigger the number, the closer to the end of the sample :)

1.82 Sample volume

StoneTracker V1.25

This shows sample volume in hexadecimal. This notation has been used because when you set up Set Volume effect notation is hexadecimal too.

1.83 Changes ChannelMeters mode

StoneTracker V1.25

Even if there seems to be no gadget, you can use the mousebuttons for several actions.

Left one : Changes current ChannelMeters mode.

- Real mode (averages volume of currently played sound)
- Fake mode (Old trackers-style)
- Volume mode, showing the volume of last played sample
- Frequency mode, showing note height of last played sample

Right one : Reactivates all muted tracks.

1.84 Pick a song in a list

StoneTracker V1.25

Pops up a requester letting you choose a song among available ones. The same as when jumping to another song using arrows, you can chain (sync) songs.

1.85 Current sample number

StoneTracker V1.25

This number shows current sample number in hexadecimal. This notation has been used for easier writing of sample numbers on patterns.

1.86 Sample name

StoneTracker V1.25

Sample name. Up to 8 chars (you'll put your greetings somewhere else).

1.87 Sample length

StoneTracker V1.25

Sample length in bytes.

1.88 Sample loop length

StoneTracker V1.25

Sample loop length in bytes. If this field is set to 0, sample will be played once then will be stopped. If not it will be played back again from its Loop point using length indicated by this field.

1.89 Set sample fine tune.

StoneTracker V1.25

Lets you finetune the sample. Value ranges from -16 to +15. Finetunes ranging from -8 to +7 are ProTracker-compatible.

Refer to SetFineTune effect.

1.90 Music general volume

StoneTracker V1.25

Enables you to set music general volume.

1.91 Shows next/previous effect

StoneTracker V1.25

Up to seven effects can be inserted on each track, while only one is displayed on screen. 'Next'/'Prev' button loop shows the next/previous effect on the track where the cursor is located.

1.92 Deletes all songs

StoneTracker V1.25

Deletes all songs.

1.93 Current song name

StoneTracker V1.25

This is the name of current song (up to 31 chars).

1.94 Edit effects

StoneTracker V1.25

Opens a window for editing all effects of current track.

1.95 Computes current song duration

StoneTracker V1.25

Stops all tracker activity and computes current song duration.

Song end is marked by :

- the end of last position
- backwards position jump command
- null speed :
- song jump command

1.96 Module name

StoneTracker V1.25

This is the name of current module (up to 31 chars).

1.97 Deletes all patterns

StoneTracker V1.25

Removes all patterns so all positions of all songs and creates a new empty pattern.

1.98 Reorganizes patterns

StoneTracker V1.25

Reorganizes patterns: keeps a single copy of identical patterns then updates pattern numbers in positions. This function is very efficient when importing modules from formats not having separated patterns for each track.

1.99 Beat Per Minute

StoneTracker V1.25

Shows/Changes current song BPM.

1.100 Tracks number

StoneTracker V1.25

Shows/Changes the number of tracks for current song.

1.101 Patterns length

StoneTracker V1.25

Shows/Changes the number of lines per pattern, for the whole module.

1.102 FX Track

StoneTracker V1.25

Activates/Deactivates control (FX) track for current song.

1.103 Miscellaneous informations

StoneTracker V1.25

When clicked, toggles between :

Patt: UNPACKED size of patterns in memory. This size is not related to the size of patterns once module will be saved.
Bank: Unpacked size of samplebank in memory.
Time: Time elapsed since music started.
Patt/Pos: Patterns count (in Hexadecimal)/Position count for the current song (in hexadecimal too).
If cursor is located on an audio track, this number shows the number of audio patterns in module.
If cursor is located on control (FX) track, this number shows the number of control patterns in module.

and :

Fast: Shows free fast memory size.
Chip: Shows free chip memory size.
Time: Shows system time.
Date: Shows system date.

1.104 Go to another position

StoneTracker V1.25

Enables you to go to another position, in current song.

1.105 Status Led

StoneTracker V1.25

Led color tells you in which mode the tracker is currently running. Color itself depends on your .

Colors show the following modes :

- Waiting (for user)
- Playing the whole music
- Loop playing current position
- Editing current position or recording
- Step by step mode

1.106 Loads a module

StoneTracker V1.25

Loads a module, in StoneTracker format or in an imported format. If the module can be loaded, all songs, patterns and positions in memory will be deleted and replaced by the ones in the module.

If XPK compression standard is installed on your system, it will be automatically used for loading modules packed with one of its methods.

If XFD decompression standard is installed on your system, it will be called too for unpacking for example ProTracker modules packed with Imploder or StoneCracker.

If none of these standards is available, StoneTracker can unpack modules packed with PowerPacker and CrunchMania; as many ProTracker modules are.

1.107 Saves current module

StoneTracker V1.25

Saves module currently edited. Saves two files, that means the partition (SPM.) which holds all songs, positions and patterns; and the samplebank (SPS.) file which holds all samples.

1.108 Load sample

StoneTracker V1.25

Loads a sample or a samplebank.

StoneTracker is able to read samples recorded in RAW, IFF/8SVX, RIFF/WAVE (16-bit or stereo samples are reduced back respectively to 8-bit and mono), or any format loaded by DataTypes (under OS 3.0).

If a StoneTracker samplebank is selected, the tracker has provision for :

- Replacing current samplebank.
- Inserting the new bank after the current one.
- Loading only samples which are not already present in current bank (remap).

1.109 Loads a module as extra song(s)

StoneTracker V1.25

Loads a module as extra song(s). New patterns will be inserted next to those already resident in memory. Only samples which are not already present in memory will be loaded (if a sample of the joined module is identical at data level to a sample already existing in current sample bank, it won't be loaded and its number will be replaced by the original ones in the patterns). Extra songs are inserted next to the current ones.

If XPK compression standard is installed on your system, it will be automatically used for loading modules packed with one of its methods.

If XFD decompression standard is installed on your system, it will be called too for unpacking for example ProTracker modules packed with Imploder or StoneCracker.

If none of these standards is available, StoneTracker can unpack modules packed with PowerPacker and CrunchMania; as many ProTracker modules are.

1.110 Information about current music

StoneTracker V1.25

Shows/Lets you edit information about current music, that means author name, legal notes (copyright, freeware, etc.), and a comment. Each text can be up to 26 chars long.

1.111 Sends an AmigaDOS command

StoneTracker V1.25

Enables you to send an AmigaDOS command. This function is similar to Workbench "Execute" function, but it avoids going back to Workbench.

1.112 Delete file(s)

StoneTracker V1.25

Enables you to erase one or several files. In order to erase several files, select several names in the file requester by holding down 'shift' key while selecting a name.

1.113 Saves module modifications

StoneTracker V1.25

Saves only what has changed since last save, either the partition (SPM.), the samplebank (SPS.), or both. If you don't change the samples it can f.ex. avoid you sample compression time if you have choosed to pack them.

1.114 Exports current module

StoneTracker V1.25

Exports current song in a format different from StoneTracker.

If current song has 4 tracks, format will be ProTracker.

If current song has 5/6 tracks, format will be 6-tracks FastTracker (6CHN).

If current song has 7/8 tracks, format will be 8-tracks FastTracker (8CHN).

1.115 Saves current samplebank

StoneTracker V1.25

Saves current samplebank.

1.116 Imported formats

StoneTracker is able to import the following formats :

Sound/Noise/Star/ProTracker Standard "module" format on the Amiga and widespread on PC too.

4 tracks, 31 instruments, no multisong, up to 128 positions, no seperated patterns for each track, up to 64 global patterns (128 or 256 on some trackers, StoneTracker loads them if required), fixed length of 64 lines per pattern.

Original format (15 instruments) comes from SoundTracker by Karsten Obarski (and is not imported under StoneTracker, because it brings too much problems), has been modified by Mahoney and Kaktus on NoiseTracker in order to handle 31 instruments, and has then been reused as is (apart from "Vibrato" effect which has been modified) by Amiga Freelancers then Cryptoburners for their

respective Protrackers.

FastTracker Format of a 6/8 channel tracker for PC.

6 or 8 tracks, 31 instruments, no multisong, up to 128 positions, no seperated patterns for each track, up to 64 global patterns, fixed length of 64 lines per pattern.

Created by Triton group on PC. Version 1 of this format is only the silly adaptation of ProTracker format for 6/8 tracks, so was it easy to import it under StoneTracker, considered that a lot of cool modules exist in this format. Now exists a version 2 (eXtended Module) of this format but it's not yet imported by StoneTracker, as most modules (btw great and signed Lizardking) use 16 tracks.

OctaMED MMD0/MMD1 Format of a well-known 4-8 channel tracker.

4 to 8 tracks, 63 instruments, multisong (but only the first song is loaded by StoneTracker for the moment... this is no lazyness but this format is really weirdo.. this will be corrected later), up to 99 songs, up to 1000 positions, no seperated patterns for each track, up to 1000 global patterns, variable length patterns, up to 3200 lines per pattern.

Created by Teijo Kinnunen. OctaMED can save three different formats : MMD0, MMD1 and MMD2. StoneTracker can import the former two, which should be enough. The latter is not yet loaded as I have not documentation about it and see no major difference from MMD1 files. For the moment, only the first song of a multi module is imported (this will be extended later), and is loaded no synthetic or hybrid instrument, because they are not (yet) implemented on the StoneTracker.

Oktalyzer 1.1 Fileformat of the first 8-channel tracker for the Amiga.

4, 6 or 8 tracks, 36 samples, no multisong, up to 128 positions, no seperated patterns for each track, up to 65535 global patterns variable length patterns, up to 65535 lines per pattern.

Created by Armin Sander and featuring the first 8 channel mixing routine ever written.

Art of Noise Fileformat of an 8-channel tracker for the Amiga.

4 or 8 tracks, 61 instruments, no multisong, up to 256 positions, no seperated patterns, up to 128 global patterns, fixed length of 64 lines per pattern.

Created by Bastian Spiegel (Twice/Lego) and quite recent so not used in anything yet. That may happen, so this loader has been written.

SoundFX 1.3 Fileformat of a SoundTracker "competitor".

4 tracks, 15 instruments, no multisong, up to 128 positions, seperated patterns for each track, up to 64 patterns, fixed length of 64 lines per pattern.

ThePlayer 4.1A-6.1A An opus of ProTracker format with packed patterns.

4 tracks, 31 instruments, no multisong, up to 128 positions, no seperated patterns for each track, up to 64 global patterns, fixed length of 64 lines per pattern.

Created by Jarno Panaanen (Guru/Sahara Surfers) and used in most demos and games since last year. For sure the best ProTracker packer I know. StoneTracker loads format versions 5.0A to 6.1A (the latest when I'm writing this). Instruments packed with "lossy" Fibonacci Delta method (an option of version 6.x) are of course unpacked.

ProRunner 1.0/2.0 An opus of ProTracker format with packed patterns, created by Cosmos/Sanity and logically used in the most part of the demos from his group. There exist two utterly different versions of this format, both are imported.

NoisePacker 2.0/3.0 An opus of ProTracker format with packed patterns.

4 tracks, 31 instruments, no multisong, up to 128 positions, seperated patterns for each track, up to 256 patterns, fixed length of 64 lines per pattern.

Created by Twins/Phenomena this is the first, I believe, packed ProTracker format and certainly one of the most widespread in games and demos until 1993.

UnicTracker 1.0/2.0 An opus of ProTracker format with packed patterns.

4 tracks, 31 instruments, no multisong, up to 128 positions, no seperated patterns for each track, up to 64 global patterns, fixed length of 64 lines per pattern.

Created by Laxity/Kefrens and used in demos from his group. There exist two versions of this format, both are imported.

ChannelPlayer An opus of ProTracker format with packed patterns.

4 tracks, 31 instruments, no multisong, up to 128 positions, seperated patterns for each track, up to 64 KB of patterns, fixed length of 64 lines per pattern.

Created by Alain Guyet, I've seen it used only for excellent soundtrack from the game "Fury of the Furies" by Frederic Motte (Moby). This format is one of the most cleverly written "ProTracker module packers" I've ever studied.

KrisTracker An opus of ProTracker format with packed patterns.

4 tracks, 31 instruments, no multisong, up to 128 positions, seperated patterns for each track, up to 256 patterns, fixed length of 64 lines per pattern.

Created by a famous unknown, I've met this format only for 4-Mat/Anarchy (or Matthew Simmonds of Core Design, who is the same person) modules. Chuck Rock, Car V-Up or Madness II musics for example are KrisTracker musics.

SkyTracker Fileformat of a ProTracker clone.

4 tracks, 31 instruments, no multisong, up to 256 positions, seperated patterns for each track, up to 256 patterns, fixed length

of 64 lines per pattern.

Created by Mr.Bluesky/Drifters and used in
demos from his group.

1.117 External software

StoneTracker V1.25

Three programs dedicated to playing StoneTracker music "outside" the editor are provided. They have been written because we try to propose an open standard.

DeliStone	DeliTracker player
EagleStone	EaglePlayer player
PlayStone	Independant player
Notes	Common notes

1.118 DeliStone

StoneTracker V1.25

As its name says, DeliStone enables the awesome music player "DeliTracker" by Peter Kunath & Frank Riffel (of which version 2.14 is currently available on Aminet) to play musics in StoneTracker format. DeliTracker is indeed truly open and lets anybody wanting to do so make it know new music formats, it's what does DeliStone for StoneTracker format. One just has to put it into "DeliPlayers" subdirectory of DeliTracker to have any StoneTracker module played, the next time DeliTracker is ran. If you have installed StoneTracker on your harddisk using our installation script, it will have asked you for DeliStone installation anyway.

NOTE : DeliStone requires DeliTracker version 2.0 at least.

1.119 EagleStone

StoneTracker V1.25

This program is to the nice module player "EaglePlayer" by Henryk Richter and Jan Blumenthal (available on Aminet too) what DeliStone is to DeliTracker : it enables EaglePlayer to recognize musics in StoneTracker format. You just have to put it into "EaglePlayers" subdirectory of EaglePlayer and it should do the trick, if it hasn't been done already by StoneTracker harddisk installation script.

NOTE : If you are using "EP-Batch" option of the latest EaglePlayer versions (recognizes module types by filename in order to not

keep all players in memory), either update format recognition file by adding a line like "SPM.* = EaglePlayers/EagleStone" in EaglePlayers.Batch file which must be located in ENVARC: directory, or shut down this option.

1.120 PlayStone

StoneTracker V1.25

If you can't get yourself a copy of DeliTracker or EaglePlayer (if you are often listening to modules, maybe should you think about getting your hands on them), PlayStone is a small program utterly independant that enables you to replay musics in StoneTracker format. It shows a simple but full-featured GadTools graphic interface. For maximum user-friendliness it declares itself to system as a commodity, so can it be controlled by Workbench "Exchange" program and handles its own keyboard calling sequence (HotKey).

Its calling syntax from Shell is as following :

PlayStone FILE,PUBSCREEN/K,QUIT/S,CX_POPUP/K,CX_PRIORITY/N/K,CX_POPKEY/K

[FILE]=file

you can pass the name of a module (with full path) to PlayStone, it will try to load and play it at startup time. if no name is given, PlayStone will not play anything when starting up and will simply wait that you select something. This option is here mainly for users of programs like DirectoryOpus where you could detect a StoneTracker module and start PlayStone with its name when you double-click on it, for example.

"FILE" keyword before a name can be ommited.

NOTE: if PlayStone is already running and playing a module, the new module name will be transmitted and it will try to load and play it.

PUBSCREEN=public_screen_name

default behavior is that PlayStone opens its window on Workbench screen. If you'd like to open in on another public screen (say DOPUS.1), you just have to pass its name to PlayStone.

QUIT

if this keyword is present in command line, it will "suicide" any other PlayStone task playing a module (same effect as selecting "Quit" option from program window menu).

CX_POPUP=[YES|NO]

tells to PlayStone if it must open its window at startup time or let it hidden. if no CX_POPUP keyword or if "CX_POPUP=YES" is present in command line, it will open it. if "CX_POPUP=NO" is given, window will remain hidden.

CX_PRIORITY=priority

enables definition of program keyboard calling sequence ("Hotkey") priority (see below). if two programs are using the same sequence, operating system transmits it to the application which has the highest priority. this option lets you choose if it will be PlayStone or another application using the same sequence which will be called. Priority ranges from -128 (lowest) to +127 (highest).

CX_POPKEY=key_sequence

default behavior is that PlayStone alternatively opens and close its window when control, alt and p keys are pressed in the same time. another key sequence can be choosen by writing it in standard commodities text form (examples : "control alt p", "help", "shift x", "shift alt z", etc.)

When called from Workbench, PlayStone handles PUBSCREEN, CX_POPUP, CX_PRIORITY and CX_POPKEY tooltypes that work just like command line parameters described above.

When PlayStone is running, its user interface shows up like this :

```

      File [xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx] [*]
Module [xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]
Song [xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

[ < ][<<][ Play ][>>][ > ][ || ][Stop][Eject]
```

File : shows and lets you choose the file containing the module to be played. You can either enter its name directly in the gadget right to File, or click on the 'getfile' right to the gadget in order to select it using a filerequester. You must like under StoneTracker select the "SPM" file of the module.

Module : when a module is loaded, shows its real name (the same as under StoneTracker).

Song : when a module is loaded and a song is played, shows its name (the same as under StoneTracker).

CD-player-style buttons :

```

<    jumps to previous song
<<   jumps backwards to previous position
Play  starts playing the music
>>   jumps forward to next position
>    jumps to next song
||    Pause
Stop  stops music
```

Eject ejects music from memory

Notice that the same commands are available in a window menu, if you prefer using it. And remember that, as any commodity, closing program window does not quit the program, the window disappears and a module eventually loaded keeps on being played. To really quit the program, you have to select the "Quit" menu option (if a module was being played, it will be automatically ejected before the program quits).

Note that, like the StoneTracker, the requester library reqtools.library by Nico François must be located in LIBS: or in the same directory as PlayStone so that the program can work.

A last note, PlayStone window is declared as an "AppWindow", so can you, if you're working under Workbench, "drop" a StoneTracker module icon on the window, PlayStone will load and play it automatically.

1.121 Common notes

StoneTracker V1.25

- . All players use just like the StoneTracker the stoneplayer.library runtime library which contains StoneTracker sound routines. It must be located in LIBS: or in the same directory as the concerned program (DeliTracker, EaglePlayer or PlayStone). Remember that this library requires a 68020 CPU at least.
- . As under StoneTracker, both files (partition and samplebank) must begin respectively with "SPM." and "SPS." and end by the same name. All programs load musics this way.
- . Compressed samplebanks are of course handled by all programs. Note that this doesn't require extra memory.

1.122 Appendix

StoneTracker V1.25

This chapter enables you to access directly important notions to know in order to fully use the StoneTracker, particularly if you're not familiar to that kind of program.

Glossary	StoneTracker terminology
Keyboard shortcuts	Keyboard shortcuts used under editor
American notation	American notation for notes
Hexadecimal notation	Hexadecimal number basis explanation
Binary notation	Binary number basis explanation
Notes about effects	What you have to know about effects
Effects	Documentation on StoneTracker effects

1.123 Effects

StoneTracker V1.25

StoneTracker understands about fifty commands. They are numbered (in hexadecimal) from 00 to 33. Effects from 00 to 1F are compatible with ProTracker, however, effects like 'Exy' have been converted to '1x0y'. For multi-effect usage, have a look at the notes about effects.

Command	Effect
00	Arpeggio
01	Portamento Up
02	Portamento Down
03	Tone Portamento
04	Vibrato
05	Tone + Vol Slide
06	Vib + Vol Slide
07	Tremolo
08	
09	Sample Offset
0A	Vol Slide
0B	Position Jump
0C	Set Volume
0D	Break Position
0E	Set Note
0F	Set Speed
10	Set Filter
11	Fine Slide Up
12	Fine Slide Down
13	Glissando CTRL
14	Vib WaveForm
15	SetFineTune
16	Loop CTRL
17	Tre WaveForm
18	
19	Retrig Note
1A	FineVolUp
1B	FineVolDown
1C	Note Cut
1D	Note Delay
1E	Position Delay
1F	
20	Set Dest Voice
21	On Dest Voice
22	Off Dest Voice
23	Set Abs Volume
24	Add Abs Volume
25	Sub Abs Volume
26	Fine Add Abs Volume
27	Fine Sub Abs Volume
28	ID
29	Jump Abs Song
2A	Jump Rel Song

```
2B Set Jump Song Position
2C Set Jump Song Line
2D
2E
2F
30 Next note
31 Previous note
32 Next note Porta
33 Previous note Porta
```

1.124 Arpeggio

StoneTracker V1.25

Arpeggio Effect : 00xy

"Arpeggio" creates a modulation on sample frequency, it makes the note vibrate. It operates in three parts :

- Normal note
- Normal note + x halftone(s)
- Normal note + y halftone(s)

This command is function of number of BPM (Beats Per Minute). To be held, the effect must be repeated each line.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

```
20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice
```

1.125 Portamento Up

StoneTracker V1.25

Portamento Up Effect : 01xx

"Portamento Up" lets you increase note frequency.

- Sample frequency + xx

xx is an hexadecimal value ranging from 0 (does nothing) and FF(255)

This command is function of number of BPM (Beats Per Minute). To be held, the effect must be repeated each line.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

```
20 Set Dest Voice
```

```
21 On Dest Voice
22 Off Dest Voice
```

1.126 Portamento Down

StoneTracker V1.25

```
Portamento Down      Effect : 02xy
```

"Portamento Down" lets you decrease note frequency.

- Sample frequency - xx

xx is an hexadecimal value ranging from 0 (does nothing) and FF (255)

This command is function of number of BPM (Beats Per Minute). To be held, the effect must be repeated each line.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

```
20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice
```

1.127 Tone Portamento

StoneTracker V1.25

```
Tone Portamento      Effect : 03xx
```

"Tone Portamento" enables to slide smoothly to the note present on current line. This one is then not considered as a note to be played but as the destination note. Transition speed is defined by xx. The smaller xx, the slower the transition. If xx = 00, previous speed will be kept.

For instant transition, use Set Note.

This command is function of number of BPM (Beats Per Minute). To be held, the effect must be repeated each line.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

```
20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice
```

1.128 Vibrato

StoneTracker V1.25

Vibrato Effect : 04xy

"Vibrato" creates a modulation on sample frequency, it makes the note vibrate.

x defines modulation speed. 1 for the slowest up to F for the fastest speed.

y defines modulation level. 1 for slight modification up to F for maximum modification.

Both parameters are independant from each other. If any of these parameters is set to zero, the previous value is kept for this parameter.

Frequency can be modulated using three waveforms :

- Sinusoid
- Triangle
- Square

Choice of modulation waveform is possible using effect Vib WaveForm.

This command is function of number of BPM (Beats Per Minute). To be held, the effect must be repeated each line.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.129 Tone + Vol Slide

StoneTracker V1.25

Tone + Vol Slide Effect : 05xy

"Tone + Vol Slide" combines a Tone Portamento and a Vol Slide.

x and y parameters are Vol Slide parameters. Tone Portamento is given no parameter so will it keep its previous speed.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
 - 21 On Dest Voice
 - 22 Off Dest Voice
-

1.130 Vib + Vol Slide

StoneTracker V1.25

Vib + Vol Slide Effect : 06xy

"Vib + Vol Slide" combines a Vibrato and a Vol Slide.

x and y parameters are Vol Slide parameters. Vibrato is given no parameter so will it keep its previous speed and amplitude.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.131 Tremolo

StoneTracker V1.25

Tremolo Effect : 07xy

"Tremolo" creates a modulation on sample volume.

x defines modulation speed. 1 for slowest speed up to F for fastest speed.

y defines modulation level. 1 for slight modification up to F for maximum modification.

Both parameters are independant from each other. If any of these parameters is set to zero, the previous value is kept for this parameter.

Volume can be modulated using three waveforms :

- Sinusoid
- Triangle
- Square

Choice of modulation waveform is possible using effect Tre WaveForm.

This command is function of number of BPM (Beats Per Minute). To be held, the effect must be repeated each line.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.132 Sample Offset

StoneTracker V1.25

Sample Offset Effect : 09xx

"Sample Offset" enables to skip the first bytes of a sample. Sample will begin at byte xx*256 (xx*100 in hexadecimal). This has instant effect and can be used several times for long samples.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.133 Vol Slide

StoneTracker V1.25

Vol Slide Effect : 0Axy

"Vol Slide" makes current sample volume slide up or down. Volume will slide up of x and down of y.

This command is function of number of BPM (Beats Per Minute). To be held, the effect must be repeated each line.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.134 Position Jump

StoneTracker V1.25

Position Jump Effect : 0Bxx

"Position Jump" is a jump instruction :) StoneTracker will jump to indicated position, as soon as current line has been fully played.

If several jumps are inserted on the same line, only one will be executed. Control track has priority over all others, then priority goes down from track 1 to track 8.

1.135 Set Volume

StoneTracker V1.25

Set Volume Effect : 0Cxx

"Set Volume" instantly changes current sample volume to hexadecimal value xx.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.136 Break Position

StoneTracker V1.25

Break Position Effect : 0Dxx

"Break Position" is a jump instruction. StoneTracker will jump to next position, line xx, as soon as current line has been fully played.

If several jumps are inserted on the same line, only one will be executed. Control track has priority over all others, then priority goes down from track 1 to track 8.

1.137 Set Note

StoneTracker V1.25

Set Note Effect : 0Exx

"Set Note" lets you redefine current sample note without restarting sample from the beginning. This command replaces the famous '03FF'.

Note will instantly change if xx=0, if not then instant change to new note will be delayed by some amount of time defined by xx. This delay must be smaller than inter-line delay defined by Set Speed.

! WARNING ! This command does not exist on ProTracker !

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.138 Set Speed

StoneTracker V1.25

Set Speed Effect : 0Fxx

"Set Speed" defines number of BPM or pause time between lines.

If xx>31, "Set Speed" changes BPM (which defaults to 125).

If xx<32, "Set Speed" changes pause time between lines (inter-line delay, defaults to 6). The greater the x, the longer the pause.

For special value xx=00, the Tracker will stop playing music.

If several of these commands are inserted on the same line, all will be executed.

1.139 Set Filter

StoneTracker V1.25

Set Filter Effect : 100x
 ProTracker equivalent : E0x

"Set Filter" enables or disables hardware low-pass filter.

If x=0 filter is enabled.

If x is different from 0 filter is disabled.

If several of these commands are inserted on the same line, all will be executed, so only the rightmost one will change filter behavior.

1.140 Fine Slide Up

StoneTracker V1.25

Fine Slide Up Effect : 110x
 ProTracker equivalent : E1x

"Fine Slide up" has the same function as Portamento Up, but transition is slower.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
 - 21 On Dest Voice
 - 22 Off Dest Voice
-

1.141 Fine Slide Down

StoneTracker V1.25

Fine Slide Down Effect : 120x
 ProTracker equivalent : E2x

"Fine Slide Down" has the same function as Portamento Down, but transition is slower.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice

1.142 Glissando CTRL

StoneTracker V1.25

Glissando CTRL Effect : 130x
 ProTracker equivalent : E3x

"Glissando CTRL" defines if a Tone Portamento must be aligned on halftones. This function can be useful for e.g. applying a portamento on a piano sound. There are high odds that piano would sound wrong if this function wasn't enabled.

If x=0, function is disabled.

If x is different from 0, function is enabled.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice

1.143 Vib WaveForm

StoneTracker V1.25

Vib WaveForm Effect : 140x
 ProTracker equivalent : E4x

"Vib WaveForm" configures Vibrato waveform. Tracks can be configured separately.

Modulation can follow three waveforms :

- x = 0 : Sinusoid (default)
- x = 1 : Triangle
- x = 2 : Square

Any other value cancels all Vibrato requests.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.144 SetFineTune

StoneTracker V1.25

SetFineTune Effect : 15xx
 ProTracker equivalent : E5x

"SetFineTune" defines current sample "Fine Tune". On ProTracker, x ranged from 0 to F for a FineTune of -8 to +7. On StoneTracker this range has been extended.

FineTune		xx Value		FineTune		xx Value	
-16	F0		-15	F1			
-14	F2		-13	F3			
-12	F4		-11	F5			
-10	F6		-09	F7			
-08	F8		-07	F9			
-06	FA		-05	FB			
-04	FC		-03	FD			
-02	FE		-01	FF			
+00	00		+01	01			
+02	02		+03	03			
+04	04		+05	05			
+06	06		+07	07			
+08	08		+09	09			
+10	0A		+11	0B			
+12	0C		+13	0D			
+14	0E		+15	0F			

Any other xx value will be ignored.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.145 Loop CTRL

StoneTracker V1.25

Loop CTRL Effect : 16xx
 ProTracker equivalent : E6x

"Loop CTRL" enables looping in current position.

If xx=0, current line is defined as loop startpoint.

If xx is different from 0, the Tracker will loop xx+1 times between current line and the line defined as loop startpoint.

On a same track, "Loop CTRL" commands cannot be embedded. If you have to use several loops, they must be inserted on several tracks (one loop per track).

1.146 Tre WaveForm

StoneTracker V1.25

Tre WaveForm Effect : 170x
 ProTracker equivalent : E7x

"Tre WaveForm" configures Tremolo waveform. Tracks can be configured separately.

Modulation can follow three waveforms :

- x = 0 : Sinusoid (default)
- x = 1 : Triangle
- x = 2 : Square

Any other value cancels all Tremolo requests.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.147 Retrig Note

StoneTracker V1.25

Retrig Note Effect : 19xx
 ProTracker equivalent : E9x

"Retrig Note" lets you restart current note several times during inter-line

delay.

If `xx=0` effect has no effect ;).

If `xx` is different from 0, sample will be restarted after some amount of time defined by inter-line delay (defined by Set Speed) divided by `xx`.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.148 FineVolUp

StoneTracker V1.25

FineVolUp Effect : 1Axx
 ProTracker equivalent : EAx

"FineVolUp" increases sample volume by `xx`.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.149 FineVolDown

StoneTracker V1.25

FineVolDown Effect : 1Bxx
 ProTracker equivalent : EBx

"FineVolDown" decreases sample volume by `xx`.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.150 Note Cut

StoneTracker V1.25

Note Cut Effect : 1Cxx
 ProTracker equivalent : ECx

"Note Cut" cuts current sample after some delay defined by xx. This delay is function of inter-line delay defined by Set Speed. What this command actually does is forcing sample volume to zero.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice

1.151 Note Delay

StoneTracker V1.25

Note Delay Effect : 1Dxx
 ProTracker equivalent : EDx

"Note Delay" delays sample start. xx defines this delay.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice

1.152 Position Delay

StoneTracker V1.25

Position Delay Effect : 1Exx
 ProTracker equivalent : EEx

"Position delay" delays reading next line. xx defines number of ticks (see Set Speed) before enabling next line to be read.

If several delays are inserted on the same line, only one will be executed. Control track has priority over all others, then priority goes down from track 1 to track 8.

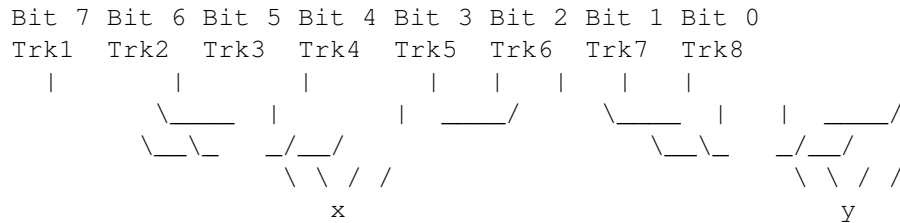
1.153 Set Dest Voice

StoneTracker V1.25

Set Dest Voice Effect : 20xy

"Set Dest Voice" defines tracks that will be controlled by the control (FX) track.

xy is defined in binary as following :



This command can only be used on Fx track.

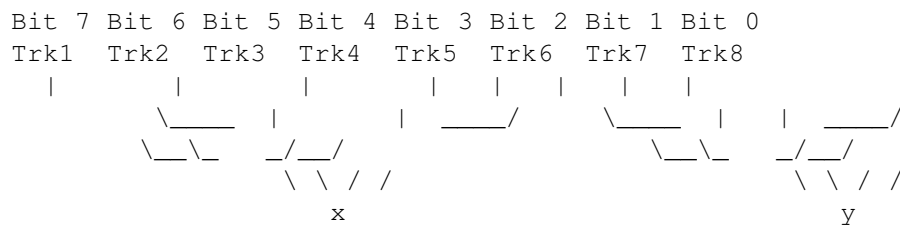
1.154 On Dest Voice

StoneTracker V1.25

On Dest Voice Effect : 21xy

"On Dest Voice" adds tracks indicated in xy to tracks that will be controlled by control (FX) track.

xy is defined in binary as following :



This command can only be used on Fx track.

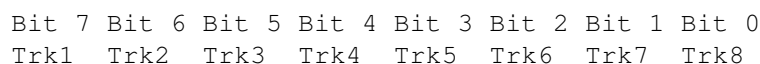
1.155 Off Dest Voice

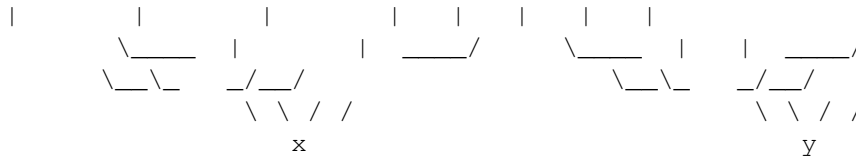
StoneTracker V1.25

Off Dest Voice Effect : 22xx

"Off Dest Voice" removes tracks indicated in xy to tracks that will be controlled by control (FX) track.

xy is defined in binary as following :





This command can only be used on Fx track.

1.156 Set Abs Volume

StoneTracker V1.25

Set Abs Volume Effect : 23xx

"Set Abs Volume" sets current track absolute volume to xx.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.157 Add Abs Volume

StoneTracker V1.25

Add Abs Volume Effect : 24xx

"Add Abs Volume" increases current track absolute volume.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.158 Sub Abs Volume

StoneTracker V1.25

Sub Abs Volume Effect : 25xx

"Sub Abs Volume" decreases current track absolute volume.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice

```
21 On Dest Voice
22 Off Dest Voice
```

1.159 Fine Add Abs Volume

StoneTracker V1.25

```
Fine Add Abs Volume      Effect : 26xx
```

"Fine Add Abs Volume" increases current track absolute volume by xx.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

```
20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice
```

1.160 Fine Sub Abs Volume

StoneTracker V1.25

```
Fine Sub Abs Volume      Effect : 27xx
```

"Fine Sub Abs Volume" decreases current track absolute volume by xx.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

```
20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice
```

1.161 ID

StoneTracker V1.25

```
ID                      Effect : 28xx
```

This command is not useful for musicians. It syncs music with external events. When the player finds this command, it calls a vector defined by application programmer passing xx as parameter.

See Developer section.

1.162 Jump Abs Song

StoneTracker V1.25

Jump Abs Song Effect : 29xx

"Jump Abs Song" jumps to song xx.

By default, player will jump to line 0 and position 0.
This can be changed using Set Jump Song Position and Set Jump Song Line.

1.163 Jump Rel Song

StoneTracker V1.25

Jump Rel Song Effect : 2Axx

"Jump Rel Song" jumps to song number (xx+current song number).
For example if you are playing song 3 and player meets 2A01,
it will jump to song 3+1=4.

By default, player will jump to line 0 and position 0.
This can be changed using Set Jump Song Position and Set Jump Song Line.

1.164 Set Jump Song Position

StoneTracker V1.25

Set Jump Song Position Effect : 2Bxx

Defines which position will be the starting one for next song jump.
After a song jump, this value is reset to 0.

1.165 Set Jump Song Line

StoneTracker V1.25

Set Jump Song Line Effect : 2Cxx

Defines which will be start

Defines which line will be the starting one for next song jump.
After a song jump, this value is reset to 0.

1.166 Next note

StoneTracker V1.25

Next note Effect : 30xx

Plays next note of the range.

Note will instantly change if xx=0, else instant change will be delayed by xx. This delay must be smaller than inter-line delay defined by Set Speed.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.167 Previous note

StoneTracker V1.25

Previous note Effect : 31xx

Plays previous note of the range.

Note will instantly change if xx=0, else instant change will be delayed by xx. This delay must be smaller than inter-line delay defined by Set Speed.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.168 Next note Porta

StoneTracker V1.25

Next note Porta Effect : 32xx

Does a Tone Portamento with next note of the range.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.169 Previous note Porta

StoneTracker V1.25

Previous note Porta Effect : 33xx

Creates a Tone Portamento with previous note of the range.

If this command is applied on control (FX) track, all tracks selected by the following commands will be affected.

- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice

1.170 Notes about effects

StoneTracker V1.25

StoneTracker multieffect enables you very simply to compose musics with loads of effects. However, there are some subtle cases that you'd better know in order to avoid some surprises.

General modification commands

- 0D Break Position
- 0F Set Speed
- 16 Loop CTRL
- 1E Position Delay
- 20 Set Dest Voice
- 21 On Dest Voice
- 22 Off Dest Voice
- 23 Set Abs Volume
- 24 Add Abs Volume
- 25 Sub Abs Volume
- 26 Fine Add Abs Volume
- 27 Fine Sub Abs Volume
- 28 ID
- 29 Jump Abs Song
- 2A Jump Rel Song
- 2B Set Jump Song Position
- 2C Set Jump Song Line

These commands are general music configuration commands. Excepted commands 20 to 22, they can be inserted on any track, either FX or music track 1 to 8. However, it's somewhat better to insert them on dedicated FX track, so that your patterns will be cleaner, and that you may, for example, reuse these patterns later in another song but running a different tempo. These commands are always executed whatever tracks are controlled by FX track. For deeper information see [here](#).

Jump commands

0B Position Jump
0D Break Position
16 Loop CTRL
29 Jump Abs Song
2A Jump Rel Song

Commands are read as following :

FX track, Track 1, Track 2, Track 3, Track 4, Track 5, Track 6, Track 7, Track 8.

When the tracker meets on the same line the commands above, only the first one will be executed.

Portamento commands

03 Tone Portamento
05 Tone + Vol Slide
0E Set Note
32 Next note Porta
33 Previous note Porta

On the same track, only one of these commands can be inserted.

Warning! If any of these commands is inserted on FX track, all tracks selected by commands 20 to 22 will then react to this command.

Volume control commands

23 Set Abs Volume
24 Add Abs Volume
25 Sub Abs Volume
26 Fine Add Abs Volume
27 Fine Sub Abs Volume

These commands control volume of each track.

This volume is not to be confused with the volume of the sample applied to the said track.

To sum up, two volumes are combined :

- volume of the sample which is controlled by ProTracker-like commands
- volume of the track which is controlled by the above commands

If these commands are applied to any other track than FX track, they will only affect the track they apply to.

If these commands are applied to FX track, then tracks selected by commands 20 to 22 will react.

They can be used, for example, when they are all applied to FX track, to decrease general music volume while using patterns previously used but with a different volume.

1.171 StoneTracker features

StoneTracker V1.25

Many of you already know the famous ProTracker, on which many musicians have found their inspiration. With StoneTracker, you have in your hands, in addition to all ProTracker abilities, many other advantages.

First of all, what is most visible is extension from 4 to 8 tracks. So, one can choose the number of tracks for each song between 4, 5, 6, 7 and 8. For deeper information look [here](#).

It's now possible to create several musics in a single module and use separated patterns for each track. For deeper information look [here](#).

Under Protracker, you were limited to one command per note. That means it wasn't possible to simultaneously do e.g. a portamento up and a volume slide. Now, you can insert up to 7 effects per line per track. For deeper information look [here](#).

In addition to previous properties, StoneTracker features a track called the FX track or control track. It's here to apply effects on the whole song. For deeper information look [here](#).

Amiga hardware limitation made it impossible, without clever handling, to play a sample longer than 128 KB. StoneTracker lets you use any sample size. The only limitation is the available memory. In addition, depending on your StoneTracker configuration, it's now possible to use 'Fast' memory for samples.

1.172 8 tracks and tracks mixing

StoneTracker V1.25

Under Protracker, voice panning is as following: Left Right Right Left
In order to follow this rule, additional tracks panning is as following :

Left Right Right Left Left Right Right Left

You have to know that the Amiga can only output 4 sounds in the same time, so are additional ('virtual') tracks always mixed to 4 tracks.

So for virtual tracks modes, configuration is as following :

- Tracks 1 and 2 are always output by the Amiga.
- Track 3 is mixed in 6-tracks mode with track 6, and with tracks 6 and 7 in 7 and 8-tracks mode.
- Track 4 is mixed in 5-tracks mode with track 5, and with tracks 5 and 8 in 8-tracks mode.

Computed tracks may have a dirtier sound than tracks directly output by the Amiga. This is the result of a loss in harmonics caused by digital mixing,

more or less important depending on its frequency.

Track mixing quality depends on used frequency. In 5-8 tracks modes, you can modify mixing frequency thanks to "Frequency" slider in up/right corner of StoneTracker screen. For pretty good quality, it's recommended to choose a frequency around or above 20 KHz.

Maximum mixing frequency depends on your machine. If you own a stock Amiga 1200 with no fast memory expansion, maximum frequency will be around 20 KHz. For an Amiga 4000 or an Amiga 1200 with accelerator board, mixing frequency can grow up to 50 KHz.

Maximum mixing frequency depends on your display too. On a 'basic' 50 Hz display, maximum frequency is 28 KHz. On a VGA, multisync, etc. display, maximum frequency is 50 KHz. This sounds pretty strange, but that's the way the Amiga works : it can only fetch sound data at the start of a video line. The more lines you have on your screen, the more sound data output.

1.173 Multi-song and separated track patterns ...

StoneTracker V1.25

StoneTracker handles modules containing several songs. This lets you create e.g. interactive sound environments using auto song chaining.

A pattern for Protracker is an array holding all notes to be played on all tracks. This array can then be called several times in the song. To each position is linked a pattern.

Under StoneTracker, a pattern holds notes for a single track only. So, when you create a song, you have to link a pattern for each track for each position.

This lets you, for example, define drums on a pattern and reuse it on several positions, eventually moving it from track to track (left or right). The main purpose is saving memory.

Patterns size indicated by StoneTracker is the size that the patterns take 'expanded' in memory. When module is saved, patterns are packed but directly used by an external Stone player (they won't be expanded, only editor does this for edition purposes).

In addition, you can change the size (the number of lines) of the patterns. This change is applied to all patterns in memory.

1.174 Multi-effect ...

StoneTracker V1.25

Format of a pattern line is as following :

Note	Sample	Eff1	Eff2	Eff3	Eff4	Eff5	Eff6	Eff7
C#3	05	0C40	0A03	0434	090F	0000	0000	0000

On every line, it is possible to insert a note, a sample number and up to 7 effects. These effects will be read from left to right.

On this example, sample 5 is played with note C#3, and using the following effects :

- Sets start sample volume to 40
- Smoothly slides volume down by 3
- Applies a vibrato of speed 3 and amplitude 4
- Cuts sample start by $\$F * \$100 = \$F00$ or 3840 bytes

Under StoneTracker editor, you will only see one effect at a time on each track. Using 'Cmd Edit' function, you can edit all effects on the line of the track where the cursor is located.

Even if only one effect is visible at a time, an underline appears on the current line to show that another effect is present on the right or on the left of current effect. You can also use 'Cmd Next' and 'Cmd Prev' commands (or their equivalent Keyboard shortcuts) to see all effects, a bit like bullets in a barrel.

For preceding example, if current track displays effect 4, display will be as following :

```
| C#3 05 090F |
```

For more information about multi-effect, take a look at the notes about effects.

1.175 FX Track

StoneTracker V1.25

FX track has its own patterns, because, as opposed to other tracks, it plays no sound. It can't hold notes or sample numbers but offers 8 slots for commands that will be applied to selectable tracks.

So, without changing the patterns of a music, you can apply a vibrato or change a track volume.

In order to select which voices will react to effects on FX track, three commands have been written :

```
20 Set Dest Voice
21 On Dest Voice
22 Off Dest Voice
```

Example:

Eff1	Eff2	Eff3	Eff4	Eff5	Eff6	Eff7	Eff8
2003	0432	21F0	0A02	2203	0101	0F03	0000

- Enables reaction only on tracks 7 and 8.
- Creates a Vibrato on tracks 7 and 8 as if this command had been inserted on these tracks.
- Enables reaction of tracks 1 to 4, so that tracks reacting to FX commands are now 1,2,3,4, plus previous tracks 7 and 8.
- Smoothly decreases sample volumes on the 6 reacting tracks.
- Disables reaction for tracks 7 and 8. Only tracks 1 to 4 are now concerned by FX track commands.
- Applies a Portamento Up on tracks 1 to 4.
- Changes inter-line delay (this applies to ALL tracks, obviously).

The last command belongs to a group of commands that are always executed whatever tracks controlled by FX track are. For deeper information have a look [here](#).

1.176 Current position number

StoneTracker V1.25

Shows/Changes position number in current song.

Using right mouse button, a request will be opened letting you choose the position number you want to go to showing its linked pattern numbers.

1.177 Pattern number

StoneTracker V1.25

Pattern number linked for current position to the track located below.

Using right mouse button, a request will be opened letting you choose which pattern you want to link for current position.

1.178 Numéro de la pattern de contrôle

StoneTracker V1.25

Pattern number linked for current position to the control (FX) track.

Using right mouse button, a request will be opened letting you choose which FX pattern you want to link for current position.

1.179 Using StoneTracker

StoneTracker V1.25

StoneTracker 1.25

```
-----
|Position|Load Mod

LoadSamp
Join Mod
Ego Area|Frequency | MonoScope |
| Clear |Save Mod

SaveSamp
Dos Cmd
Delete |           |           |
| Edit  | Update
Export
SaveBank
SaveExec
Main   | 24 Khz |           |
-----|           # |           |
| Song  | Samples  |Mix
Flush
Pick
Delete
Clear|-----|
|<
1
>| < >   Name   Len <> Rep <   0> Vol <40>| ChannelMeters | Cmd |
| Pick  | 01 Bass 01  41200 Len <   0> FTU < 0>|" Link InterMasterVolume}| ←
           |@{|

| Clear |-----| |           |Prev|
| Edit  | Song name   : From the future ...      | |           |Edit|
| Time  | Module name : Cool baby II              |Patt :Clear
Edit
Remap|

-----
| BPM <125>  Tracks <4>  PattLen <40>  FX | Pat:...  Bank:...  Time:...  |
-----
|12|         5         |         2         |         13         |         1         | 5 |^v|
-----
|POS|      Track 1      |      Track 2      |      Track 3      |      Track 4      | FX | " ←
      Link InterLedState} |
-----
```

1.180 "

1.181 Creates an executable module

StoneTracker V1.25

Creates an executable module which will use StonePlayer.Library to play itself.

When you run the generated program, module will start playing and control will be given back to AmigaDOS.

In order to stop music run the program again or send a CTRL-C to executable module task.

1.182 Developer area

StoneTracker V1.25

This section is reserved for programmers wishing to use StoneTracker modules in their applications. It is available only for purchasers of the commercial version of this software.

1.183 Position Editor

StoneTracker V1.25

Opens position editor.

```
Position editor
1
2
3
4
5
6
7
8
FX
    Ins
    Rem
    Copy
    Rept
    Exg
    Sprd
    Dub
    Swap
```

1.184 Track selection

StoneTracker V1.25

These buttons select which tracks will react to commands below them.

Buttons which are recessed (brighter) show tracks which are SELECTED.

1.185 "

StoneTracker V1.25

Inserts a position between current one and next one.
Inserted position will contain patterns numbers set to 0.

1.186 "

StoneTracker V1.25

Removes current position (the ones following are shifted one position back).

1.187 "

StoneTracker V1.25

Copies current position to another one which is selected by requester.

1.188 "

StoneTracker V1.25

Copies current position on each position between a starting and an ending one both selected by requesters.

1.189 "

StoneTracker V1.25

Swaps current position with one selected by requester.

1.190 "

StoneTracker V1.25

Fills pattern numbers from current position to a position selected by requester with pattern numbers ranging from and to pattern numbers selected by requester. This applies only to selected tracks. Ehm.. Well.. try it!

1.191 "

StoneTracker V1.25

Provided that two tracks are selected, this function copies pattern numbers from the first track to the second, from current position to a position selected by requester.

1.192 "

StoneTracker V1.25

Provided that two tracks are selected, this function swaps pattern numbers between the first track and the second, from current position to a position selected by requester.

1.193 Pattern editor

StoneTracker V1.25

Opens pattern editor.

```
    Pattern editor
    Cut
Copy
Paste
Swap
    Exg
Rem
    Ins
    Del
    OctUp
OctDn
NotUp
NotDn
```


1.194 "

StoneTracker V1.25

Copies pattern under cursor into the clipboard then clears the pattern.

1.195 "

StoneTracker V1.25

Copies pattern under cursor into the clipboard.

1.196 "

StoneTracker V1.25

Copies pattern in clipboard over pattern under cursor.

1.197 "

StoneTracker V1.25

Swaps pattern in clipboard with pattern under cursor.

1.198 "

StoneTracker V1.25

Swaps pattern under cursor with a pattern selected by requester.

1.199 "

StoneTracker V1.25

Removes patterns from pattern under cursor to the end of the list.

1.200 "

StoneTracker V1.25

Inserts an empty line under cursor, shifting all lines below one line down.

1.201 "

StoneTracker V1.25

Removes a line under cursor, shifting all lines below one line up.

1.202 "

StoneTracker V1.25

Increases by one range all notes of pattern under cursor.

1.203 "

StoneTracker V1.25

Decreases by one range all notes of pattern under cursor.

1.204 "

StoneTracker V1.25

Increases by one halftone all notes of pattern under cursor.

1.205 "

StoneTracker V1.25

Decreases by one halftone all notes of pattern under cursor.

1.206 Song Editor

StoneTracker V1.25

Opens song editor.

```
Song editor
Insert
Remove
Copy
Exchg
Join
Split
Single
Print
PrtAll
```

1.207 "

StoneTracker V1.25

Creates a new song after having requested some parameters, then inserts it at current song number, shifting all following songs by one number.

1.208 "

StoneTracker V1.25

Removes current song, shifting all following songs by one number.

1.209 "

StoneTracker V1.25

Copies current song over a song selected by requester.

1.210 "

StoneTracker V1.25

Swaps current song with a song selected by requester.

1.211 "

StoneTracker V1.25

Adds positions of a song selected by requester next to the positions of current song.

1.212 "

StoneTracker V1.25

Splits current song in two, by moving its positions from current to end into another song selected by requester.

1.213 "

StoneTracker V1.25

After you confirmed, removes all songs but the current one.

1.214 "

StoneTracker V1.25

Prints current song.

1.215 "

StoneTracker V1.25

Prints all songs.

1.216 StoneTracker Configuration

StoneTracker V1.25

StoneTracker 1.25 Configuration Editor

| Mod Pack @| None | Open tracks 8 | Open with FX Channel V |

```

| Bank Pack @| None | Max open tracks 1 | New song with FX Channel V |
|-----| New song tracks 1 | Break on null speed |
| Def KHz : 21 # | Alloc Treshold 64 | Enable key repeat V |
|-----|-----| Save IFF samples V |
| Open Pattlen $ 40 | Action : @| Open | Confirm overwriting V |
| Max Pattlen $ 40 | Add patterns 8 | Ask for AREXX |
| Warn pat above 10 | Add FX patterns 8 | Keep AppIcon position |
| Warn pos above 10 | Alloc positions 8 | Auto close Workbench |
| | Full lock if inactive V |
|-----|
1* |Border | | Background (4) | | R: 0 # | |
2 |Pen 1 | | Dark (5) | | G: 0 # | |
3 |Pen 2 | ^| Bright (6) | ^| B: 0 # | |
4 |Pen 3 | v| Hilight (7) | v| | |
|-----|
1* R:240 # | | ", link CnfSlider3}| Real @{| DOS Paths ... | ←
Save |
2 G:240 # | | Vol | AREXX Macros ... | Use |
3 B:240 # | | Freq | Misc parameters ... | Cancel |
4 |CS| | Fake | | |
|-----|

```

1.217 "

StoneTracker V1.25

StoneTracker features samples bank packing in order to spare some space on (hard)disk, drawback being a longer load/save time. As of version 1.25, four options are available :

. None

Samples are saved in their original state without being packed. Use this option if you can't stand packing/unpacking time or if the module is going to be used in an application of yours (in this case, samples MUST be unpacked !!).

(Note that when using 'update' function that saves modifications, if you haven't changed the samples, then the bank will not be re-saved, avoiding possible packing time.)

. DeltaHuffman

The fastest packer/unpacker and the least efficient.
 Pack ratio : 20-25% average.
 Author : Emmanuel Marty

. CrM / LZH-Delta

Method that packs the most and which is the slowest.
 Pack ratio : 35-40% average.
 Author : Thomas Schwartz, programmer of CrunchMania.

(Note that this method requires CrM.Library shared library in LIBS: for

packing - StoneTracker unpacks by itself. We are not granted to distribute this file along with StoneTracker.)

. StoneCruncher / Mickey

Intermediate method between DeltaHuffman and CrM/LZH-Delta.

Pack ratio : 25-30% average.

Author : Michael Lavaire

(This method requires StoneCruncher.Library shared library - provided - in LIBS: for both packing and unpacking)

1.218 "

StoneTracker V1.25

Default number of tracks that will show the song which is created at program startup time (ranging from 4 to 8).

1.219 "

StoneTracker V1.25

Defines if song created at program startup time will immediatly show a FX track or not.

1.220 "

StoneTracker V1.25

Maximum tracks available on the song created at program startup time (ranging from 4 to 8).

1.221 "

StoneTracker V1.25

Defines if a new song created will immediatly show a FX track or not.

1.222 "

StoneTracker V1.25

Defines the default number of tracks that will be displayed in new song creation request.

1.223 "

StoneTracker V1.25

Defines if sound must be muted when player meets a nullspeed command (0F00), if not player will stop playing ;) the music and will let current notes end.

1.224 "

StoneTracker V1.25

Default mixing frequency for "virtual tracks" modes (5-8 tracks). All samples played on virtual tracks will be recomputed to this frequency. Obviously, the greater the frequency, the greater the quality, and the slower the machine.

On a "normal" display (PAL or NTSC), that means which displays at an horizontal frequency of 15.75 Khz, mixing frequency ranges from 4 to 28 Khz. If you own a (S)VGA, Multisync, etc. display which displays "deinterlaced" modes of ECS and AGA at an horizontal frequency of 31.5 Khz, mixing frequency will range from 4 to 50 Khz (Amiga works the way it works...)

1.225 "

StoneTracker V1.25

StoneTracker handles up to 65.536 patterns, and, contrary to ProTracker (which has a maximum of 64), it can't allocate required memory for this maximum number of patterns once at program startup time (for 65.536 patterns, one would need 64 Megabytes of workspace [and which cannot be put as virtual memory on harddisk] !!).. So StoneTracker allocates memory as required. In order to avoid memory fragmentation, patterns memory is not allocated separately for each pattern but by groups.

This number defines the number of patterns reserved in one allocation. The greater the number, the smaller the chances of fragmentation, and the greater the chances of spilling memory (for example, if

the Tracker is told to allocate patterns 100 per 100 and you have 101 patterns in memory, there will be memory allocated for 200 patterns).

In most cases you won't even have to care about this parameter, as its default value of 64 seems efficient (we are using it from the start of StoneTracker development).

1.226 "

StoneTracker V1.25

Defines if keyboard repeat is enabled in "pattern edition" mode and in "record" mode (leaving the key pressed repeats the same note).

1.227 "

StoneTracker V1.25

Defines if StoneTracker will save samples as IFF when using command for saving separated samples ('Save Samp'). If not, samples will be saved as RAW format (no header).

1.228 "

StoneTracker V1.25

Length of patterns (in lines) shown at program startup. Ranges from \$1 to \$FFF.

1.229 "

StoneTracker V1.25

Defines which action is concerned by default parameters below (number of auto-created patterns, control patterns and positions) when program starts, or when a new song is created (these parameters being then default parameters shown in request).

1.230 "

StoneTracker V1.25

Defines if StoneTracker will ask before writing over a file that already exists.

1.231 "

StoneTracker V1.25

Maximum length of patterns (in number of lines), ranging from \$1 to \$FFF. Really tune this number function of your needs! The greater this number, the greater the required workspace (under editor, only).

1.232 "

StoneTracker V1.25

Number of patterns automatically created either when program starts or when a new song is created (see Action) (in the latter case this is the default value shown in song creation request).

1.233 "

StoneTracker V1.25

Defines if StoneTracker will warn you when, at startup time, it states that REXXMaster is not running and so no AREXX command will be able to run.

1.234 "

StoneTracker V1.25

When adding patterns by typing directly a pattern number (that doesn't exist) into the slots above tracks, any addition of a number of patterns greater than this number will require confirmation.

1.235 "

StoneTracker V1.25

Number of control patterns automatically created either when program starts or when a new song is created (see Action) (in the latter case this is the default value shown in song creation request).

1.236 "

StoneTracker V1.25

Defines if StoneTracker should use the position on Workbench screen stored in icon file used as AppIcon, if not it will make it "float" (Workbench will position the icon where possible)

1.237 "

StoneTracker V1.25

When adding positions by typing directly a position number (that doesn't exist) into the position number above line numbers, any addition of a number of positions greater than this number will require confirmation.

1.238 "

StoneTracker V1.25

Number of positions automatically created either when program starts or when a new song is created (see Action) (in the latter case this is the default value shown in song creation request).

1.239 "

StoneTracker V1.25

Defines if StoneTracker should try to close the Workbench when it starts up, in order to free some chip memory.

1.240 "

StoneTracker V1.25

Defines if StoneTracker screen must be locked (nothing is refreshed) when it isn't displayed, because you are multitasking on another application - this enables to free a lot of CPU time. If this option is disabled, StoneTracker will only lower its task priority, making it less greedy for CPU time, giving it back to the other running tasks.

1.241 "

StoneTracker V1.25

Palette number. You can define up to four different palettes for StoneTracker screen and change instantly, depending on your mood, using this button.

1.242 "

StoneTracker V1.25

Scrolls list of colors available on the left.

1.243 "

StoneTracker V1.25

Scrolls list of StoneTracker screen regions available on the left.

1.244 "

StoneTracker V1.25

Lets you choose the level of intensity of red, green and blue for currently edited color.

1.245 "

StoneTracker V1.25

Number of vu-meters palette. You can define up to four different palettes for vu-meters (ChannelMeters) and change instantly, depending on your mood, using this button.

1.246 "

StoneTracker V1.25

Lets you choose the level of intensity of red, green and blue for currently edited vu-meter line.

1.247 "

StoneTracker V1.25

Selects the line of vu-meter where the color must be edited.

1.248 "

StoneTracker V1.25

Selects the default vu-meter type used at program startup, that means "real" (average sound volume of what is currently played by the corresponding track - like ProTracker 3.xx), "volume" (volume of last sample played on the track), "frequency" (note height of last played sample) and "fake" (volume set to maximum when a sample starts, then smoothly growing down - just like the very first trackers)

1.249 "

StoneTracker V1.25

Saves configuration so that it will be restored next time your start the program. Configuration is saved as "ENVARC:StoneTracker.prefs"

1.250 "

StoneTracker V1.25

Returns to the Tracker with current configuration, but doesn't save it - next time you run StoneTracker, configuration will be as it was before running configuration editor.

1.251 "

StoneTracker V1.25

Cancels modifications made to the configuration and returns to the Tracker with config as it was before entering the configuration editor.

1.252 "

StoneTracker V1.25

Copies a color from a vu-meter line to another. Method : select line to be copied, press this button once, select the target line, press this button again.

1.253 "

StoneTracker V1.25

Spread colors between two vu-meter lines. Method : select starting line, press this button once, select ending line, press this button again

1.254 Default paths configuration window

StoneTracker V1.25

Opens default paths configuration window.

```
DOS Paths...
-----
| Module Path : ST-00:           G |
| Sample Path : RAM:             G |
| Default Path : RAM:            G |
|-----|
```

```
| Module Mask : ~(SPS|SMPL)~(???|????). |
| Sample Mask : #? |
|-----|
| Printer Path : PRT: |
| Page Height : 64 Fetch ... |
|-----|
```

1.255 "

StoneTracker V1.25

Default path where StoneTracker will fetch modules when using module load and save commands. If you are working with a harddisk, setting here where your modules are located will avoid indicating it all the time.

NOTE: if you change this path, the new one will be taken into account only when you restart the program.

1.256 "

StoneTracker V1.25

Selects the default modules path by file request.

1.257 "

StoneTracker V1.25

Default path where StoneTracker will fetch samples when using sample and samplebank load and save commands. If you are working with a harddisk, setting here where your samples are located will avoid indicating it all the time.

NOTE: if you change this path, the new one will be taken into account only when you restart the program.

1.258 "

StoneTracker V1.25

Selects the default samples path by file request.

1.259 "

StoneTracker V1.25

Default path for all file commands that do not handle a particular file type, mainly 'delete file' command.

1.260 "

StoneTracker V1.25

Selects the default misc files path by file request.

1.261 "

StoneTracker V1.25

Default "Mask" used in module file requests. This mask enables to include or exclude files having particular letters or words in their name. The main goal here is to exclude samplebank files, beginning by "SPS.".

1.262 "

StoneTracker V1.25

Default "Mask" used in sample file requests. This mask enables to include or exclude files having particular letters or words in their name.

1.263 "

StoneTracker V1.25

Path used by AmigaDOS for accessing printer, normally "PRT:".

1.264 "

StoneTracker V1.25

Number of lines per page of your printer.

1.265 "

StoneTracker V1.25

Fetches the number of lines per page of your printer in your prefs files.

1.266 Opens AREXX macros installation window

StoneTracker V1.25

Opens AREXX macros installation window.

```
AREXX Macros ...
-----
| A:                | | |
| B:                | | |
| C:                | ^ |
| D:                | v |
|-----|
|                                G|
|-----|
```

1.267 "

StoneTracker V1.25

AREXX macros list. 14 can be installed in the same time, corresponding to letters A to N (their keyboard shortcut being CTRL + their letter).

1.268 "

StoneTracker V1.25

Scrolls AREXX macros list.

1.269 "

StoneTracker V1.25

Lets you edit the name of the file containing the AREXX macro to be installed on the letter currently selected in the list above.

1.270 "

StoneTracker V1.25

Selects by file request the file containing the AREXX macro to be installed on the letter currently selected in the list above.

1.271 Opens misc parameters configuration window

StoneTracker V1.25

Opens misc parameters configuration window.

```
Misc parameters ...
-----
| App Icon: StoneTracker.Info      G |
| AREXX I/O: CON:0/0//100/StoneREXX/ |
| Hotkey: control alt s             |
| ScreenMode: PAL:High Res         G |
|-----|
| Fast load : @| SampleSize  KB 256 |
|-----|
```

1.272 "

StoneTracker V1.25

Name of icon file containing AppIcon to be used for StoneTracker.

1.273 "

StoneTracker V1.25

Selects by file request the icon file containing AppIcon to be used for StoneTracker.

1.274 "

StoneTracker V1.25

Defines console window to be used for i/o of AREXX commands ran from the StoneTracker.

1.275 "

StoneTracker V1.25

StoneTracker "Hot Key". The indicated key sequence when pressed makes editor screen either come to front or open if it was "hidden".

1.276 "

StoneTracker V1.25

Shows screen mode for StoneTracker screen (and configuration screen).

1.277 "

StoneTracker V1.25

Selects screen mode for StoneTracker screen (and configuration screen) using a request. Note that StoneTracker screen requires at least a size of 672 per 200 pixels, and that you will need a height of 256 pixels to work properly.

1.278 "

StoneTracker V1.25

StoneTracker features fast memory samples loading, if you don't have enough chip memory. This option will slightly slow down the player in 4-tracks mode, and may speed it up in virtual tracks modes (5-8 tracks).

This button rules the condition of loading samples in fast memory rather than in chip. Three options :

- never
- if sample size is greater than a given size
- if free chip memory size falls under a given size.

1.279 "

StoneTracker V1.25

StoneTracker features fast memory samples loading, if you don't have enough chip memory. This option will slightly slow down the player in 4-tracks mode, and may speed it up in virtual tracks modes (5-8 tracks).

Defines in kbytes either the minimum size for a sample to be loaded in fastram, or the minimum size of free chip memory under which samples are loaded in fastram, depending on current mode.

1.280 Keyboard shortcuts ...

StoneTracker V1.25

Keyboard shortcuts

General keys :

General keys :

F1	Select octaves #1 and #2
F2	Select octaves #2 and #3
F6 TO F10	Move into the pattern (for compatibility with other trackers)
SPACE	Stop music, enter/exit edit mode.
DEL	Delete note under cursor (edit mode only)
BACKSPACE	Delete line under cursor (edit mode only)
SHIFT BACKSP.	Insert new line under cursor (edit mode only)
RIGHT SHIFT	Start recording \
RIGHT AMIGA	Play current position / with left shift (or right mousebutton)
RIGHT ALT	Play current song / starts at current line
BOTH ALTs	Restart and play current song
<	Cut current voice
`	Pick song by requester
RETURN	Enter step mode, step one (with left shift: exit step mode)
UP	Move one line up
SHIFT-UP	Move 16 lines up
ALT-UP	Move to first line
CTRL-UP	Move to previous position
DOWN	Move one line down
SHIFT-DOWN	Move 16 lines down
ALT-DOWN	Move to last line
CTRL-DOWN	Move to next position
LEFT	Move one character left
SHIFT-LEFT	Move one voice left
ALT-LEFT	Move to first voice
CTRL-LEFT	Show previous command column (multieffects)
RIGHT	Move one character right
SHIFT-RIGHT	Move one voice right
ALT-RIGHT	Move to last voice
CTRL-RIGHT	Show next command column (multieffects)
TAB	Move to the note on next voice to the right

Notes keyboard (just like other trackers) :

23 567 90 -	23 567 90 -
AZERTYUIOP^\$	QWERTYUIOP{}
SD GHJ LM	SD GHJ L;
WXCVRN,;:=	ZXCVRNM,./

Numeric keypad :

without qualifiers - set lower digit of sample number

```
[]/* : x1,x2,x3,x4
789- : x5,x6,x7,x8
456+ : x9,xA,xB,xC
123 : xD,xE,xF
. : x0
0 : select sample 0
ENTER : pick sample by requester
```

with left shift - set higher digit of sample number

```
[]/* : 1x,2x,3x,4x
789- : 5x,6x,7x,8x
456+ : 9x,Ax,Bx,Cx
123 : Dx,Ex,Fx
. : 0x
0 : select sample 0
ENTER : pick sample by requester
```

Note Skip keys :

CTRL + 1-9 Select new Note Skip value.

Requester keys :

```
ESC \
N Negative answer
Amiga/B /
```

```
Y \ Positive answer
Amiga/V /
```

```
RETURN Satisfy single-answer requester (ex. Info)
        Select an element in a list (ex. Pick Sample)
```

UP/DOWN keys If the requester shows a list of elements, go up or down
in that list (16 times faster with SHIFT, directly at top
or bottom with ALT)

AREXX Macro calls (with ctrl) :

A-N Call AREXX Macro A-N

Shortcuts (with left shift) :

O Load Module

W	Save Module
L	Load Sample
M	Save Sample
B	Save Bank
U	Update
D	Delete File(s)
DEL	Clear current pattern
R	Remap patterns
C	Clear patterns
V	Clear positions
G	Clear songs
A	Add song
T	Time song
X	Mix position to sample
F	Flush samples
E	Edit commands
S	Open/Close Sample Editor
`	Pick pattern by requester
\	Close/Open Workbench
N	Make editor inactive
H	Hide
I	Information
Q	Quit
