

Digiboost

Patrick Beerhorst

Copyright © 3/97 Patrick Beerhorst

COLLABORATORS

	TITLE : Digiboost		
ACTION	NAME	DATE	SIGNATURE
WRITTEN BY	Patrick Beerhorst	March 28, 2025	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

1	Digiboost	1
1.1	DIGI-Booster V2.12	1
1.2	Copyright	2
1.3	Disclaimer	2
1.4	Requirements for work with Digiboost:	2
1.5	Digiboost' formats:	3
1.6	Features...	3
1.7	More features...	4
1.8	Digiboost-effect parameters	4
1.9	What do you want us to do?	5
1.10	Some hints for proper work with Digiboost	6
1.11	Greetings fly to...	6
1.12	"	7
1.13	Digibooster module format:	7
1.14	Authors	10
1.15	Registration	10
1.16	Changes	11
1.17	Keyboard shortcuts	14
1.18	some infos about sampler...	17
1.19	Some problems with protection	18

Chapter 1

Digiboost

1.1 DIGI-Booster V2.12

```
=====
DIGI Booster professional 2.12 (20.05.1997)
=====
```

```
- SHAREWARE -
```

```
by Tomasz&Waldemar Piasta. All rights reserved!
```

```
~Copyright      ~
~Disclaimer     ~

~Requirements   ~
~Features~~~~~  ~
~Formats~~~~~   ~
~Effects~~      ~
~Keyboard~~     ~
~DBM-Format~~   ~
~About Sampler  ~

~Hints~~~~~    ~
~Problems~~~~~ ~
~Development~   ~
~Future~~~~~   ~
~Greetings&thanks ~

~Authors~~~~~  ~
~Registration   ~
~Changes~~~~~  ~
```

1.2 Copyright

Copyrights :

The program Digi Booster Professional in this version and its documentation files are (C)opyright 1997 by Tomasz & Waldemar Piasta. All rights reserved.

The right of using full version of this program is granted to you by paying the SHAREWARE-fee of 50 DEM (30 U\$) to the authors.

You will receive a full personal version of program. See registration form for details.

Digi Booster makes use of:

Ahi device by Martin Blom (aminet/dev/misc/ahi.lha)
Regtools.library

WARNING!!!

Digi Booster Pro is protected in a special way:
If we will get cracked version of our program or installer we will know who cracked DBpro or give it to someone who did it, so beware because you will take the criminal consequences of this !!!

1.3 Disclaimer

Disclaimer :

The authors take no responsibility for any results of the use of this program.

This software is provided "AS IS" and there is no warranty of any kind, so that you use this software at your own risk.

1.4 Requirements for work with Digiboost:

Requirements:

- Any Amiga with 68020 or better
 - Kickstart 2.0 or higher
 - ahi.device (Audio Hardware Interface available on Aminet:
dev/misc/ahi.lha)
-

- asl.library & iffparse.library (ahi.device makes use of this libs)
- regtools.library by Nico Francois

1.5 Digiboost' formats:

Formats:

- Supported formats from other editors and platforms:
 - S3M (Screamtracker3 / PC)
 - XM (Extended module / Fasttracker2 / PC)
 - Octamed (MMD0,MMD1-MMD3 / Amiga)
 - MOD (Protracker 3.15-4.0B / 4-32Channels / Amiga)
 - Digi (Digibooster 1.x / Amiga)
 - Oktalyzer (4-8 channels / Amiga)

1.6 Features...

Features :

- 100% assembler code
- Export *.MOD MOD.* files (4-32 channels) - not in unregistered version
- up to 128 channels (4/6/8/10/..../128) - in unregistered version you can save only 4 channel modules
- up to 7 octaves
- 16MB maximum sample size
- AHI support (at this moment there's support for following sound card: Tocatta, Delfina, Wavetools, Prelude and of course for Paula)
- max. 256 samples (only in editor, but file format (DBM) supports max 65535)
- max. 1024 patterns -||-
- max. 1024 positions -||-
- two different commands in one line and in same time. It means that you

can use for example: sample offset command 9xx and vibrato 4xx

- 8 and 16 bit audio modes (so you can load to Digi Booster 16 bit samples) formats supported: IFF8SVX ; IFF16SV ; RIFFWAV 8BIT ; RIFFWAV 16BIT; AIFF 8/16BIT / STEREO/MONO

~Next~page~

1.7 More features...

Features (2):

- almost all key shortcuts and commands are Pro Tracker compatible
- ping pong loop and command E3x - backward play
- realtime instrument effects: volume envelope
boost envelope
filter envelope
offsets
panning envelope and much more

envelope consists of: 32 points
2 sustain points
1 loop
- instrument/sample mode; you can use the same sample a few times with other parameters e.g. you have string sample no. 1 and you want use this sample a few time, each with different finetune, volume, loop and let's say one with volume envelope, second with boost envelope. In normal tracker (like Pro Tracker) you have to load the same sample two times to memory. In DB pro you have Instruments. So you have to do following things:
 - load sample to bank no. 1 ; so you have an instrument no.1 which use sample no.1
 - in instrument no. 2 change sample bank to no. 1
 - now you can set different effects and parameters to instrument no. 1 and no. 2

~Previous~page~

1.8 Digiboost-effect parameters

Digi Booster has almost fifty effects. All Pro Tracker effects are supported (without Efx).

Here you are a full list of Digi Booster Pro II effects.

(*) = If the command parameter is zero, the last nonzero parameter will be used.

0xx	Appregio
1xx (*)	Portamento up
1Fx (*)	Fine Portamento up
2xx (*)	Portamento down
2Fx (*)	Fine Portamento down
3xx (*)	Glissando
4xx (*)	Vibrato
5xx (*)	Tone portamento+Volume slide
5xF (*)	Tone portamento+Fine Volume slide up
5Fx (*)	Tone portamento+Fine Volume slide down
6xx (*)	Vibrato+Volume slide
6xF (*)	Vibrato+Fine Volume slide up
6Fx (*)	Vibrato+Fine Volume slide down
8xx	Set panning
9xx (*)	Sample offset
Axx (*)	Volume slide
AxF (*)	Fine volume slide up
AFx (*)	Fine volume slide down
Bxx	Position jump
Cxx	Set volume
Dxx	Pattern break
E00	Low pass filter on
E01	Low pass filter off
E1x	Fine portamento up
E2x	Fine portamento down
E3x	Play from backward
E40	Turn off sound in channel
E5x	Turn on/off channel
E6x	Set loop begin/loop
E7x	Set offset
E8x	Set panning
E9x	Retrig note
EAx	Fine volume slide up
EBx	Fine volume slide down
ECx	Note cut
EDx	Note delay
EEx	Pattern delay
Fxx	Set tempo/BPM
Gxx	Set global volume
Hxx (*)	Global volume slide
K00	Key off
Lxx	Set envelope position
Oxx (*)	Sample offset slide
Pxx (*)	Panning slide

1.9 What do you want us to do?

Future:

- real time DSP effects, more envelopes like boost, filter etc.
- Power PC version
- your proposals :-)
- make a loader for IT - Impulse Tracker modules

1.10 Some hints for proper work with Digiboost

Some hints:

If Digi Booster crashes while starting or selecting AHI audio mode we suggest you to check if you have correct versions of following libraries:

- asl.library
- ifffparse.library
- reqtools.library
- diskfont.library

You can also check AHI device and its AudioModes.

If you have slow machine you can increase speed by limiting mixing frequency in a config option.

Also you can speed up the whole program by loading Kick3.1 into a fastram (use BlizKick). It's two times faster than Kick3.0 & ahi.device works much faster using Kick3.1.

For best quality of sound run CyberSound 14bit_calibration and then select a tables/calibration audio mode in Digi Booster config window.

DigiBoosterPro doesn't like MCP & likewise :-) (Don't know why) so if you don't want to crash your machine change MCP to MCX (it's better & more safety program).

1.11 Greetings fly to...

Greetings & thanks:

- Martin Blom for ahi.device
 - K-P Koljonen for some help
 - Patrick Beerhorst for documentation in guide format
 - Jan van den Baard for GadToolsBox
 - Nico Francois for reqtools.library
-

- T.F.A for ASM-one
- Peter Kunath
- MacGyver for his bug reports

All people from Investation & Dinx Project

1.12 "

Digi Booster Pro was developed using ASM'one, Amiga1200, Blizzard IV, 18MB ram, 1.3GB hd & other stuff...

If there are some big firms which want to make DB a real commercial product please contact us as soon as possible.

1.13 Digibooster module format:

Digi Booster PRO - DBM0 file format by Tap of Inv

DBM is Iff like format. It means that module consists of hunks. Each hunk has a 4 bytes identification and after that hunk length (LWORD - 4bytes).

If the module doesn't consist of any hunk, for example VENV - volume envelope hunk that will mean this module doesn't use volume envelope effect.

These hunks DBM module should always consists of: NAME, INFO, SONG, INST, PATT, SMPL

Offset	Length	
0	4	ID "DBM0" - module identification
4	2	tracker version: eg. \$0200 - version 2.00
6	2	reserved
8	4	ID "NAME" - module name hunk identification
+4	4	hunk length
+8	44	mod name
???	4	ID "INFO"
+4	4	hunk length
+8	2	number of instruments in module
+10	2	number of samples in module
+12	2	number of songs in module
+14	2	number of patterns in module
+16	2	number of channels
???	4	ID "SONG" - songs hunk identification

+4	4		hunk length
+12	44		song name
+56	2		number of orders for this song
+58	???		order list (words) NOTE: Each order list can use the same numbers of patterns.

???	4		ID "INST" - instruments hunk identification
+4	4		hunk length
+8	30		instrument name
+38	2		sample number used in this instrument
+40	2		instrument volume
+42	4		instrument finetune (stored in HZ)
+46	4		instrument repeat start
+50	4		instrument repeat length
+54	4		flags:
			bit 0 set - forward loop used
			bit 1 set - ping pong loop used

???	4		ID "PATT" - patterns hunk identification
+4	4		hunk length
+8	2		number of positions (rows) in pattern
+10	4		size of packed data
+14	???		packed pattern data

???	4		ID "SMPL" - samples hunk identification
+4	4		hunk length
+8	4		flags:
			bit 0 set - 8 bit sample
			bit 1 set - 16 bit sample
			bit 2 set - 32 bit sample
+12	4		sample length
+16	???		sample data (unsigned)

???	4		ID "VENV" - volume envelopes hunk identification
+4	4		hunk length
+8	2		how many volume envelope tables does this hunk contain
+10	2		to which instrument this volume envelope data belongs
+12	134		volume envelope data

Volume Envelope structure:

Each volume envelope table takes 134 bytes.
 Max. number of points is 32.
 Max. number of sustain points is 2.
 Max. number of loops is 1.

 Offset Length

+0	1		type	bit 0: envelope on/off
				bit 1: 1st sustain on/off
				bit 2: envelope loop on/off
				bit 3: 2nd sustain on/off
+1	1		number of envelope points	
+2	1		1st sustain point	
+3	1		loop start point	
+4	1		loop end point	
+5	1		2nd sustain point	
+6	1		reserved	

+8	2		1st point time (in vblanks)	
+10	2		1st point volume (range: 0-64)	
+12	2		2nd point time (in vblanks)	
+14	2		2nd point volume (range: 0-64)	
+16	2		...	

Packed pattern format:

If the byte is zero it means that you must skip to next position (row).

If the byte is nonzero bits are interpreted as follows:

bit 0 set: Note follows (byte)
bit 1 set: Instrument number follows (byte)
bit 2 set: 1st effect type follows (byte)
bit 3 set: 1st effect parameter follows (byte)
bit 4 set: 1st effect type follows (byte)
bit 5 set: 1st effect parameter follows (byte)

Next byte is a channel number to which this data belongs.

Example:

00 - skip to next pattern position
00 - skip to next pattern position
03 - byte is nonzero; the bit 0 and 1 is set; take note and instrument
24 - channel number to which following data belongs
81 - note (hex: \$51 - this is a 5th octave and 1st note)
04 - instrument number

Last words

I think these informations are enough at the moment - the format is rather self - explaining. But if you have any problems you can always contact me.

1.14 Authors

Programmers:

Tomasz & Waldemar Piasta
Poprzeczna 66/6
51-167 Wroclaw
Poland

E-mail:Waldek@zakus.ita.pwr.wroc.pl

~How~to~register?~

Amigaguide-Deutsch:

Patrick Beerhorst

E-mail:Syntec@Stardate.Westfalen.de

1.15 Registration

Registration:

The right of using full version of this program is granted to you by paying the SHAREWARE-fee of 50 DEM (30 U\$) to the authors.

You will receive a full personal version of program. See registration form for details.

If you want to use DBM modules in commercial products you have to register.

Please fill in the registration form included in this archive and send it to:

Tomasz & Waldemar Piasta
Poprzeczna 66/6
51-167 Wroclaw
Poland

After sending registraton form and money to us you will recive a personified latest version of DIGI Booster Pro. If you are a registered user of DIGI Booster Pro you can make an upgrade for free (via E-mail) or for only \$5 or 10DEM via snail-mail (cost of shipment) by sending us the money and disk. Remember you can only do an upgrade for example from version 2.xx to 2.xx. The rules of upgrading can be changed in future!!!

Thanks a lot for your support!

1.16 Changes

Changes in V2.01

- Made a loader for patch samples in XM converter and fixed some bugs. So there shouldn't be longer any problems with converting XM modules.
- Fixed some bugs in envelope editor.
- Added a cut bass option in sampler.
- Fixed a bug in volume envelope procedure.
- Added some Pro Tracker keyboard options like:

Drumpad

Use \ to toggle modes. One or more dots will appear to the right of the 8bit/16bit mode gadget.

No dots: Normal keypad.

1 dot: Drumpad.

2 dots: Drumpad - Edit/Rec possible.

Use Alt + keypad key to set note. "Select note" text will appear then select a note from keyboard. DIGI Booster will store a pressed note and actual octave.

lalt+o - open module

lalt+s - save module

lalt+l - load sample/instrument

lalt+q - Quit from program

lalt+r - Go to sampler screen

lalt+d - Go to disk op.

lalt+e - Go to edit option

lalt+m - Go to mod info screen

lalt+x - Go to mixer screen

lalt+c - Go to configuration screen

lalt+a - Turn On/Off spectrum analyzer

lalt+v - Go to volume envelope editor

lalt+p - Go to panning envelope editor
lalt+b - Go to boost envelope editor
lalt+f - Go to filter envelope editor

- removed a bug which appeared when samples with ping pong loop were played
- fixed Timer (vbl irq changed to cia 1/50 sec)
- added possibility to turn off/on scopes
- fixed bug in scopes
- fixed bug when allocating audio channels, cia interrupt
- added config
- added Export MOD option; so now you can create 4-32CHN .MOD files; this option will not be available in unregistered version
- added a loader for AIFF 8/16 bit / mono/stereo samples.
- removed a bug in mixer which appeared when you chose a cancel in file requester
- the volume boost in mixer window is showed in %
- fixed a playing notes from keyboard while module is played
- for now the volume envelopes are heard in realtime, it means that when you play notes on keyboard instruments are played with volume envelopes; if you want to turn off the sustain points or envelope loop press key above tab (in edit mode this key also places a key OFF note)
- removed a bug in ECx and Fxx commands; so the F00 should now work fine.
- added unfortunately missed in DB1.x and 2.0 PRO command EDx
- fixed a bug, BTW not mine; when you played samples with very short loops AHI device terrible slowed down; now there is a procedure which makes 1024 bytes buffers (both for ping pong and forward loops) in realtime and then gives it to AHI play :) so there shouldn't be longer any system freezes...
- when saving sample a file name is taken from a instrument's name list

Changes in V2.10

- added a menu and some keyboard shortcuts see ~Keyboard~
 - fixed a lot of small bugs like:
 - fixed playing of 256 position long patterns
 - fixed editing of commands in pattern editor
 - fixed e6x - loop command
-

- fixed dxx pattern break (this command had limitation: you were able to skip to 63th position max. - now it's extended to 99)
- fixed playing 256 pos long patterns by return key
- when you change position when module is not played program does not skip to start of pattern now
- fixed converting 'fade out' in XM's volume envelope
- fixed EDx command when an instrument has vol envelope
- when initializing sound there shouldn't be longer any system crashes
- Digi Booster is now more user friendly
- added a new faster procedure to show samples in sampler window (works only with AGA and ECS machines because this is a hack and will not work with graphic cards)
- added highlighting of marked block in editor

Changes in V2.11

- fixed some bugs in allocating music channels and initializing ahi.device
- up to 256 (row skip) in quantize
- added some keyboard options missed in older versions
- added save instrument option; so now you are able to save/load sample together with parameters like: volume envelope, finetune, ping pong loop etc.
- added sample routine (make use of HardDiskRecord by Martin Blom)

Changes in V2.12

- added lalt + arrow left/right to change number of editing pattern
 - added stop playing a sample with space in sampler
 - added I O P [] 9 0 = keys to play sample and edit notes
 - added some option visible at right side of pattern editor (CUT, COPY, PASTE, FLIP, INSERT POS, DELETE POS PATT/TRACK/BLOCK ALL/COMMANDS)
 - added show repeatmarks in sampler while showing a range or zoom in a sample
 - fixed bug in ZoomOut option
-

1.17 Keyboard shortcuts

Keyboard :

note: lalt means left alt
lshift means left shift
lamiga means left amiga

High notekeys: 2 3 5 6 7 9 0 =
Q W E R T Y U I O P []

Low notekeys: S D G H J L ;
Z X C V B N M , . /

F1 - Octave up (there are 7 octaves; from note C-1 to B-7; 84 notes)
F2 - Octave down

lalt+F3 - Cut whole pattern (notes+commands) to buffer
lalt+F4 - Copy whole pattern (notes+commands) to buffer
lalt+F5 - Paste patt-buffer (notes+commands) to pattern

lshift+F3 - Cut track (notes+commands) to buffer
lshift+F4 - Copy track (notes+commands) to buffer
lshift+F5 - Paste track-buffer (notes+commands) to track

ctrl+F3 - Cut commands in track to buffer
ctrl+F4 - Copy commands in track to buffer
ctrl+F5 - Paste cmd-buffer to track

lamiga+F3 - Cut commands in pattern to buffer
lamiga+F4 - Copy commands in pattern to buffer
lamiga+F5 - Paste cmd-buffer to pattern

F6 - Go to patternposition 0
F7 - Go to patternposition 16
F8 - Go to patternposition 32
F9 - Go to patternposition 48
F10- Go to patternposition 63

lshift+F6-F10 - Store current patternposition on selected F-key
lalt+F6-F10 - Play pattern from the stored patternposition

lshift+Return - Insert blank note at cursorposition and move the others down. Notes beyond last patternposition will be lost!

lshift+Backspce - Delete note above cursorposition and move the others up. You can NOT do this if you're at patternposition 0!

lalt+Return - As above, but with all tracks

lalt+Backspace - As above, but with all tracks

ctrl+Return - Push cmds in track one down

ctrl+Backspace - Drag cmds in track one up

lamiga+Return - Push cmds in pattern one down

lamiga+Backspace - Drag cmds in pattern one up

ctrl+0-9 - (quantize) Select how many slots PT will jump down each time you insert a note (this is only in Edit-mode)

Space - Toggle between Stop/Edit-mode

< (beside Z) - All channel's volumes to 0

right Amiga - Play Pattern

right Alt - Play Song

Del - Delete note under cursor

lalt+Del - Delete command only

lshift+Del - Delete note and command

left or right shift+1 - turn on/off a first visible channel from left

left or right shift+2 - turn on/off a second visible channel from left

left or right shift+3 - turn on/off a third visible channel from left

left or right shift+4 - turn on/off a fourth visible channel from left

left or right shift+5 - turn on/off a fifth visible channel from left

left or right shift+6 - turn on/off a sixth visible channel from left

left or right shift+9 - turn off all channels

left or right shift+0 - turn on all channels

On Numeric pad:

0 - Select instrument \$0

1st row - Select instrument \$1-\$4

2nd row - Select instrument \$5-\$8

3rd row - Select instrument \$9-\$c

4th row - Select instrument \$d-\$f

Just . - Select instrument \$10

Enter + select instruments \$11-\$1f

lamiga (Plus keys below) - Transposing like in Edit Option

Instrument/Track	Instrument/Pattern

1 - Note Up	2 - Note Up
q - Note Down	w - Note Down
a - Octave Up	s - Octave Up
z - Octave Down	x - Octave Down
All/Track	All/Pattern

3 - Note Up	4 - Note Up

e - Note Down	r - Note Down
d - Octave Up	f - Octave Up
c - Octave Down	v - Octave Down

Tab - Move cursor to next track
lshift+Tab - Move cursor to prev track

NOTE: (-) means that this option is not implemented yet

ctrl+a - Toggle channel on/off

ctrl+b - Mark block

ctrl+c - Copy notes + commands to buffer
lalt+ctrl+c - Copy commands only to buffer

ctrl+d - Delete notes + commands, drag notes & commands up
lalt+ctrl+d - Delete commands, drag commands up

-ctrl+e - expand track

ctrl+f - toggle filter on/off

ctrl+h - Transpose block up

ctrl+i - Insert notes + commands, push notes + commands down
lalt+ctrl+i - Insert commands, push commands down

ctrl+j - Join-paste notes + commands
lalt+ctrl+j - Join-paste commands

ctrl+k - Kill to end of track notes + commands
lalt+ctrl+k - Kill to end of track commands only

ctrl+l - Transpose block down

ctrl+m - Toggle multikeyboard on/off

-ctrl+n - Re-mark last block

-ctrl+o - Contract track

ctrl+p - Paste commands+notes
lalt+ctrl+p - Paste commands only

ctrl+r - Restore F6-F10 positions

ctrl+t - swap tracks

-ctrl+u - undo last change

ctrl+x - Cut notes + commands to buffer
lalt+ctrl+x - Cut commands to buffer

ctrl+y - Backwards notes+commands

lalt+ctrl+y - Backwards commands only

lalt+o - open module

lalt+s - save module

lalt+l - load sample/instrument

lalt+q - Quit from program

lalt+r - Go to sampler screen

lalt+d - Go to disk op.

lalt+e - Go to edit option

lalt+m - Go to mod info screen

lalt+x - Go to mixer screen

lalt+c - Go to configuration screen

lalt+a - Turn On/Off spectrum analyzer

lalt+v - Go to volume envelope editor

lalt+p - Go to panning envelope editor

lalt+b - Go to boost envelope editor

lalt+f - Go to filter envelope editor

Return - Step one note forward

Backspc- Step one note backward

cursor up/down - change position of cursor

lshift+cursor up/down - change position of cursor (faster)

lalt+cursor up/down - change position of cursor (fastest)

ctrl+arrows right - instrument up

ctrl+arrows left - instrument down

lalt+cursor right - patternnumber up

lalt+cursor left - patternnumber down

left or right shift + cursor right - song-position up

left or right shift + cursor left - song-position down

Drumpad

Use \ to toggle modes. One or more dots will appear to the right of the 8bit/16bit mode gadget.

No dots: Normal keypad.

1 dot: Drumpad.

2 dots: Drumpad - Edit/Rec possible.

Use lalt + keypad key to set note. "Select note" text will appear then select a note from keyboard. DIGI Booster will store a pressed note and actual octave.

1.18 some infos about sampler...

About Sampler:

If you want to sample some sound, copy file HardDiskRecord to C: directory. You can find it in AhiDev.lha archive:

"Developer/Examples/Low-level/HardDiskRecord"
or in our archive in C: directory

1.19 Some problems with protection

Some problems:

If Digi Booster Pro (registered version) crashes after 5 minutes. It means that you have broken some rules (read below) & you must to install it once again. Sorry for it but it's caused by our protection.

Here follows text taken directly from the last page of DBpro installer.

There are some rules after installing Digi Booster on HD:

- you can't rename file Digi Booster !!!
- you can't rename dir where Digi Booster was installed !!!
- you can't copy Digi Booster because it won't be run !!!

If you won't treat this rules serious Digi Booster Pro will always crash after some time !!!
