

# **BoulderDäsh**

Silke Bormann Mersmann

<b>COLLABORATORS</b>
----------------------

	<i>TITLE :</i> BoulderDäsh		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY	Silke Bormann Mersmann	July 26, 2024	

<b>REVISION HISTORY</b>
-------------------------

NUMBER	DATE	DESCRIPTION	NAME

# Contents

<b>1</b>	<b>BoulderDäsh</b>	<b>1</b>
1.1	Boulder Däsh	1
1.2	Epileptic seizure or altered consciousness	2
1.3	Introduction	2
1.4	System Requirements	3
1.5	Features	4
1.6	Distribution	5
1.7	How to register?	5
1.8	Restrictions of this unregistered version	5
1.9	How to Install BoulderDäsh	6
1.10	How To Play	6
1.11	The Game Elements	7
1.12	Elements: Ground	8
1.13	Elements: Space	8
1.14	Elements: Space - Fake	8
1.15	Elements: Diamonds	8
1.16	Elements: Stones	8
1.17	Elements: Eggs	9
1.18	Elements: Metal	9
1.19	Elements: Metal - Fake	9
1.20	Elements: Walls	9
1.21	Elements: Magic Wall	9
1.22	Elements: Growing Wall (left/right)	10
1.23	Elements: Growing Wall (up/down)	10
1.24	Elements: Water	10
1.25	Elements: Slime	10
1.26	Elements: Butterflies	10
1.27	Elements: Fireflies	11
1.28	Elements: Stonie	11
1.29	Elements: Rockford	11

---

1.30 Elements: Rockford - Twin . . . . .	12
1.31 Elements: In . . . . .	12
1.32 Elements: Out . . . . .	12
1.33 Elements: Out - Blinking . . . . .	12
1.34 Elements: Out - Fake . . . . .	12
1.35 Elements: Gravitation Arrows . . . . .	13
1.36 Elements: User Block . . . . .	13
1.37 Elements: Space Background . . . . .	13
1.38 Own Graphic Sets . . . . .	13
1.39 The Included Graphics . . . . .	15
1.40 Own Character Sets . . . . .	16
1.41 The Included Character Sets . . . . .	17
1.42 Own Sample Sets . . . . .	17
1.43 The Included Sample Sets . . . . .	18
1.44 Own Music . . . . .	19
1.45 The Included music . . . . .	19
1.46 FAQS . . . . .	20
1.47 FAQ - What is a keyfile? . . . . .	21
1.48 FAQ - Where should I place the keyfile? . . . . .	21
1.49 FAQ - After playing a while BoulderDäsh denies keyboard usage! . . . . .	21
1.50 FAQ - The keyboard control is not very useful! . . . . .	22
1.51 FAQ - BoulderDäsh does not run! . . . . .	22
1.52 FAQ - Why can't I start BoulderDäsh and the Level editor? . . . . .	22
1.53 FAQ - Memory problems on game start, but the level editor works fine! . . . . .	22
1.54 FAQ - Why isn't possible to run the level editor? . . . . .	23
1.55 FAQ - While playing sometimes mysterious mistakes in the spaces appear. . . . .	23
1.56 FAQ - All included games are using the same color! . . . . .	23
1.57 FAQ - All included intermissions are to big! . . . . .	24
1.58 FAQ - How can I change the RTG game/title screen mode? . . . . .	24
1.59 FAQ - Changing start level and lives is not possible! . . . . .	24
1.60 FAQ - The player names are lost! . . . . .	24
1.61 FAQ - I don't understand the Hiscores! . . . . .	24
1.62 FAQ - Where are my scores, if I load a new game? . . . . .	25
1.63 The Musikspieler isn't working! . . . . .	25
1.64 Why is the play feature not always working? . . . . .	25
1.65 FAQ - Own levels . . . . .	26
1.66 FAQ - After starting a level, Rockford does not appear. Why? . . . . .	26
1.67 FAQ - The structure of the game . . . . .	26
1.68 FAQ - In my own graphics all animations are wrong! . . . . .	26

---

1.69 FAQ - My animations are too short! . . . . .	26
1.70 FAQ - What is a Chunk? . . . . .	27
1.71 FAQ - CMAP-Chunk not found! . . . . .	27
1.72 FAQ - BODY-Chunk not found! . . . . .	27
1.73 FAQ - BMHD-Chunk not found! . . . . .	27
1.74 History . . . . .	28
1.75 Future . . . . .	36
1.76 Buglist . . . . .	36
1.77 Thanx . . . . .	37
1.78 The Author . . . . .	38
1.79 All BoulderDäsh Windows . . . . .	38
1.80 The Main Window . . . . .	39
1.81 The Main Window - Game Editor . . . . .	39
1.82 The Main Window - Game Settings . . . . .	39
1.83 The Main Window - Hiscores . . . . .	40
1.84 The Main Window - Load Game . . . . .	40
1.85 The Main Window - Start Game . . . . .	40
1.86 The Main Window - Quit Game . . . . .	40
1.87 The Game Editor . . . . .	40
1.88 The Game Editor - Level List . . . . .	41
1.89 The Game Editor - New Level . . . . .	41
1.90 The Game Editor - Delete Level . . . . .	41
1.91 The Game Editor - Level Up . . . . .	41
1.92 The Game Editor - Level Down . . . . .	42
1.93 The Game Editor - Edit Level . . . . .	42
1.94 The Game Editor - Level Settings . . . . .	42
1.95 The Game Editor - Game Information . . . . .	42
1.96 The Game Editor - Load Level . . . . .	42
1.97 The Game Editor - Save Level . . . . .	43
1.98 The Game Editor - Load Game . . . . .	43
1.99 The Game Editor - Link Game . . . . .	43
1.100The Game Editor - Save Game . . . . .	43
1.101The Game Editor - Delete Game . . . . .	43
1.102Game Settings . . . . .	44
1.103Game Settings - Player Names . . . . .	44
1.104Game Settings - Data Sets . . . . .	44
1.105Game Settings - Music Player . . . . .	44
1.106Game Settings - Screen . . . . .	44
1.107Game Settings - Miscellaneous . . . . .	45

---

1.108Game Settings - Number of Players . . . . .	45
1.109Game Settings - Number of Lives . . . . .	45
1.110Game Settings - Start Level . . . . .	45
1.111Game Settings - Ok . . . . .	46
1.112Game Settings - Save . . . . .	46
1.113Game Settings - Cancel . . . . .	46
1.114Game Settings - Player Names . . . . .	46
1.115Player Names - Names . . . . .	46
1.116Player Names - Names on Level Startup . . . . .	47
1.117Player Names - Show Score Results . . . . .	47
1.118Player Names - Ok . . . . .	47
1.119Player Names - Save . . . . .	47
1.120Player Names - Cancel . . . . .	47
1.121Game Settings - Data Sets . . . . .	47
1.122Data Sets - Data Cache . . . . .	48
1.123Data Sets - Level Data . . . . .	48
1.124Data Sets - Level Colors . . . . .	48
1.125Data Sets - Default Graphic Set . . . . .	49
1.126Data Sets - Default Character Set . . . . .	49
1.127Data Sets - Default Sample Set . . . . .	49
1.128Data Sets - Default Music . . . . .	49
1.129Data Sets - Ok . . . . .	50
1.130Data Sets - Save . . . . .	50
1.131Data Sets - Cancel . . . . .	50
1.132Game Settings - Music Player . . . . .	50
1.133Music Player - Music List . . . . .	50
1.134Music Player - Audio Mode . . . . .	51
1.135Music Player - Prefer . . . . .	51
1.136Music Player - Music Player . . . . .	51
1.137Music Player - Play Mode . . . . .	51
1.138Music Player - Ok . . . . .	52
1.139Music Player - Save . . . . .	52
1.140Music Player - Cancel . . . . .	52
1.141Game Settings - Screen . . . . .	52
1.142Screen - RTG . . . . .	52
1.143Screen - Full Screen . . . . .	53
1.144Screen - Editor Full Screen . . . . .	53
1.145Screen - Scroll Speed 2x . . . . .	53
1.146Screen - Editor Scroll Speed 2x . . . . .	53

---

1.147Screen - Screenmode . . . . .	53
1.148Screen - Ok . . . . .	54
1.149Screen - Save . . . . .	54
1.150Screen - Cancel . . . . .	54
1.151Game Settings - Miscellaneous . . . . .	54
1.152Miscellaneous - Default Game . . . . .	54
1.153Miscellaneous - Title Picture . . . . .	55
1.154Miscellaneous - Levelchanging Tilulit . . . . .	55
1.155Miscellaneous - Simple Tilulit . . . . .	55
1.156Miscellaneous - Editor Tilulit . . . . .	55
1.157Miscellaneous - Ok . . . . .	55
1.158Miscellaneous - Save . . . . .	55
1.159Miscellaneous - Cancel . . . . .	56
1.160The Highscores . . . . .	56
1.161The Highscores - Type . . . . .	56
1.162The Highscores - Delete Scores . . . . .	57
1.163Game results . . . . .	57
1.164The Level Editor . . . . .	57
1.165Level Settings . . . . .	58
1.166Level Settings - Level Name . . . . .	59
1.167Level Settings - Visual and Noisy . . . . .	59
1.168Level Settings - Water and Slime . . . . .	59
1.169Level Settings - Earthquakes . . . . .	59
1.170Level Settings - Scores . . . . .	59
1.171Level Settings - Miscellaneous . . . . .	60
1.172Level Settings - Ok . . . . .	60
1.173Level Settings - Cancel . . . . .	60
1.174Levelsettings - Visual and Noisy . . . . .	60
1.175Visual and Noisy - Level Width . . . . .	60
1.176Visual and Noisy - Level Height . . . . .	61
1.177Visual and Noisy - Graphic Set . . . . .	61
1.178Visual and Noisy - Color Set . . . . .	61
1.179Visual and Noisy - Character Set . . . . .	61
1.180Visual and Noisy - SampleSet . . . . .	61
1.181Visual and Noisy - Music . . . . .	62
1.182Color Set Selection . . . . .	62
1.183Color Set Selection - Color Sets . . . . .	62
1.184Color Set Selection - Ok . . . . .	62
1.185Color Set Selection - Cancel . . . . .	62

---

1.186Level Settings - Water and Slime . . . . .	63
1.187Water and Slime - Water Growing time . . . . .	63
1.188Water and Slime - Magic Water Time . . . . .	63
1.189Water and Slime - Water Growing Rate . . . . .	63
1.190Water and Slime - Water Flood Rate . . . . .	63
1.191Water and Slime - Water Maximum . . . . .	64
1.192Water and Slime - Slime Rate . . . . .	64
1.193Level Settings - Earthquakes . . . . .	64
1.194Earthquakes - Mode . . . . .	64
1.195Earthquakes - Activate Time . . . . .	65
1.196Earthquakes - Delay . . . . .	65
1.197Earthquakes - Length . . . . .	65
1.198Earthquakes - Force Rate . . . . .	65
1.199Level Settings - Points . . . . .	65
1.200Points - Diamond . . . . .	65
1.201Points - Diamond Extra . . . . .	66
1.202Points - Diamonds>99 . . . . .	66
1.203Points - For Bonus Life . . . . .	66
1.204Points - Time Bonus . . . . .	66
1.205Level Settings - Miscellaneous . . . . .	66
1.206Miscellaneous - Game Speed . . . . .	67
1.207Miscellaneous - Level time . . . . .	67
1.208Miscellaneous - Magic Wall Time . . . . .	67
1.209Miscellaneous - Diamonds Needed . . . . .	67
1.210Miscellaneous - Intermission . . . . .	67
1.211Miscellaneous - Gravitation . . . . .	68
1.212The Game Information . . . . .	68
1.213The Game Information - Author . . . . .	68
1.214The Game Information - Comment . . . . .	68
1.215The Game Information - Date . . . . .	69
1.216The Game Information - Version . . . . .	69
1.217The Game Information - Ok . . . . .	69
1.218The Game Information - Cancel . . . . .	69
1.219The Menus of BoulderDäsh . . . . .	69
1.220The Main Window Menu . . . . .	69
1.221The Main Window Menu: Project . . . . .	70
1.222The Main Window Menu: Project . . . . .	70
1.223The Main Window Menu: Project . . . . .	70
1.224The Main Window Menu: Action . . . . .	70

---



1.225The Main Window Menu: Action . . . . .	71
1.226The Game Editor Menu . . . . .	71
1.227BarLabel . . . . .	71
1.228The Game Editor Menu: Project . . . . .	72
1.229The Game Editor Menu: Project . . . . .	72
1.230The Game Editor Menu: Project . . . . .	72
1.231The Game Editor Menu: Project . . . . .	72
1.232The Game Editor Menu: Project . . . . .	72
1.233The Game Editor Menu: Edit . . . . .	73
1.234The Game Editor Menu: Edit . . . . .	73
1.235The Game Editor Menu: Edit . . . . .	73
1.236The Game Editor Menu: Edit . . . . .	73
1.237The Game Editor Menu: Edit . . . . .	73
1.238The Game Editor Menu: Edit . . . . .	74
1.239The Game Editor Menu: Replace . . . . .	74
1.240The Game Editor Menu: Replace . . . . .	74
1.241The Game Editor Menu: Replace . . . . .	74
1.242The Game Editor Menu: Replace . . . . .	75
1.243The Game Editor Menu: Replace . . . . .	75
1.244The Game Editor Menu: Replace . . . . .	75
1.245The Game Editor Menu: Replace . . . . .	76
1.246Block Position Table . . . . .	76
1.247Tooltypes of the Graphic Set Files . . . . .	77
1.248Tooltypes of the Music Files . . . . .	78
1.249The Tooltypes of the Title Screen . . . . .	79
1.250Technical information about BoulderDäsh . . . . .	79

---

## Chapter 1

# BoulderDäsh

### 1.1 Boulder Däsh

Boulder Däsh V4.20

(C) Guido Mersmann 1987 - 1998

BOULDERDÄSH IS A SHAREWARE PRODUCT

READ THE DISTRIBUTION SECTION FOR INFORMATION ON DISTRIBUTION

Contents

```
~~~~~Introduction~~~~~
~~~    Epilepsy Warning~~~~~
~~~~~System~Requirements~~~~~
~~~~~Feature~List~~~~~
~~~~~Distribution~~~~~
      How To Register
~~~~~How~To~Install~~~~~    BoulderDäsh
~~~~~The Windows~~~~~    of BoulderDäsh
~~~~~The Menus~~~~~    of BoulderDäsh
~~~~~How~To~Play~~~~~    BoulderDäsh
~~~~~The Game Elements~~~~~    of BoulderDäsh
~~~~~Own~Graphic Sets~~ ~~~~
~~~~~Own~Character Sets~~~~~
~~~~~Own~ Sample Sets~~~~~
~~~~~Own Music~~~~~
~~~~~FAQS~~~~~
~~~~~History~~~~~
~~~~~Future~~~~~
~~~~~Bug~List~~~~~
~~~~~Thanx~~~~~
~~~~~The~Author~~~~~    Bug Reports, Incitements...
~~~~~Technical~ information ~~~~~    about BoulderDäsh
```

## 1.2 Epileptic seizure or altered consciousness

Epileptic seizure or altered consciousness

-----

A very small percentage of people have a condition that causes them to epileptic seizure or altered consciousness when exposed to certain light patterns or flashing lights, including those that appear on a television screen and while playing games. Such people may have no medical history of seizures or epilepsy. Please take the following precautions to minimise any risk:

Prior to use:

\textdegree{} If you, or anyone in your family, has ever had an epileptic condition or has experienced altered consciousness when exposed to flickering light, consult your doctor prior to playing. ↵

\textdegree{} Sit at least 2.5m (8 ft) away from the screen.

\textdegree{} If you are tired or have not had much sleep, rest and commence playing only after you are fully rested. ↵

\textdegree{} Make sure that the room in which you are playing is well lit. ↵

\textdegree{} Use the game on as small a television screen as possible (preferably 14" or smaller). ↵

During use:

\textdegree{} Rest for at least 10 minutes per hour while playing a game.

\textdegree{} Parents should supervise their children. If you or your child experiences any of the following symptoms while playing: dizziness, altered vision, eye or muscle twitches, loss of awareness, disorientation, any involuntary movement or convulsions, discontinue use IMMEDIATELY and consult your doctor. ↵

## 1.3 Introduction

Introduction

-----

BoulderDäsh is a convert of the original BoulderDash from the good old C64.

So you will say this is already there. You are right, there are a lot of clones, but they are all not as good as the original, if you look at the graphic or the feeling of playing it. Even converts at PC are not

---

very good. Also on fast PCs the animation speed of the objects is lowered, if there is scrolling.

My version was tested by different independent persons and all said the same: This BoulderDäsh is the best. I will not praise myself here, but test it yourself, built your own opinion and please tell me about it.

## 1.4 System Requirements

### System Requirements

---

BoulderDäsh (should work) works on all Amigas with OS 2.0 or higher.

Some functions are not available under 2.0, because they presume OS3.x+ (MemoryPools,...)

From OS2.1 on BoulderDäsh is able to work multilingual.

To run BoulderDäsh a minimum of 1MB is required. To use all features (Ingame music and my internal music box) more memory is required.

If you want to use BoulderDäsh on graphic boards then the RTGMaster system by Steffen Haeuser and an 68020 as minimum is required. I suggest an 68030-25Mhz as minimum. You will find the rtgmaster.library and there sublibraries on Aminet and AminetCDs. NOTE: BoulderDäsh supports only version 23 and above.

In addition to that and the standard libraries nothing else is needed.

BoulderDäsh was tested with the following configurations without any problems.

A2000-30	OS3.1 1MB Chip and 8 MB Fast
A2000	OS3.1 1MB Chip and 4 MB Fast
A2000	OS3.1 1MB Chip
A2000	OS3.0 1MB Chip and 4 MB Fast
A2000	OS3.0 1MB Chip
A2000	OS2.1 1MB Chip and 2 MB Fast
A2000	OS2.1 1MB Chip and 4 MB Fast
A500	OS2.0 1MB Chip
A500	OS2.1 1MB Chip
A500	OS2.1 1MB Chip and 1,8 MB Ranger Fast
A500	OS2.1 1MB Chip and 2 MB Fast
A1200-20	OS3.0 2MB Chip
A1200-30	OS3.0 2MB Chip
A1200-30	OS3.0 2MB Chip and 4 MB Fast
A1200-30	OS3.0 2MB Chip and 8 MB Fast
A1200-30	OS3.1 2MB Chip and 4 MB Fast
A1200-30	OS3.1 2MB Chip and 8 MB Fast
CD32	OS3.1 2MB Chip
CD32-SX1	OS3.1 2MB Chip and 4 MB Fast

---

A4000-30 OS3.0 2MB Chip and 16 Fast  
A4000-30 OS3.1 2MB Chip and 16 Fast  
A4000-40 OS3.1 2MB Chip and 16 Fast

## 1.5 Features

Features

-----

\textdegree{} 1:1 Clone of the Original!

\textdegree{} multitasking available!

\textdegree{} Softscrolling and full speed also under a MC68000.  
(no jerking with the animation's or the scrolling)

\textdegree{} Graphic board compatible via RTGMaster.library V23+.  
Allows up to 256 colors.

\textdegree{} more than 3612 caves in this edition!!

\textdegree{} 35 different graphic sets.

\textdegree{} 6 different character sets.

\textdegree{} 5 different sample sets.

\textdegree{} 6 ingame tunes.

\textdegree{} Local support.

\textdegree{} Kickstart 2.04 or higher is required.

\textdegree{} Programmed in Commodore Styleguide.

\textdegree{} All adjustments are possible per Gadtools-GUI.

\textdegree{} Enlarged by more Play~Elements (FALSE stones, FALSE Metal,...)  
So new interesting possibilities within the levels are possible.

\textdegree{} The size of the levels is free (Under OCS/ECS/AGA it depends on ↵  
ChipMem).

\textdegree{} The highscorelist is automatically handled for each game.

\textdegree{} Comfortable Level~Editor.

\textdegree{} Different gravitation directions.

\textdegree{} Game~Editor for creating complete games.

\textdegree{} With the help of a paint program an own~graphics can be created.

\textdegree{} With the help of a sampler own~sounds can be created.

---

\textdegree{} Create your own ingame music by using Protracker.

## 1.6 Distribution

Distribution

-----

This program should be published on every public medium, as long as all files in the archive are unchanged. If this medium is a CD I expect a free copy. (AminetCDs excluded)

BoulderDäsh is Shareware. Some features are not available without a keyfile.

I expect from everybody, who uses BoulderDäsh regularly, to register immediatly. I think this does not hurt anybody, and I will have more fun to integrate new features or write a new game.

Updates may be requested from Aminet and via AD SG Homepage <http://www.amigaworld.com/adsg>.

I am not liable for injures or data loss caused by BoulderDäsh. The use of BoulderDäsh is on your own responsibility !!!

## 1.7 How to register?

How to register?

-----

BoulderDäsh registration is very easy. The Shareware fee is 20\$ or 30DM. I think the requested fee is not to much for this program. After registration you are able to use the complete programm.

The registration of Boulderdäsh is done by the Amiga Developer Support Group (ADSG) More information about paying and shipping is available within the ADSG-RegTool. The keyfile will be shipped within 1 or 2 weeks.

If you want to register, then do it now.

Please use the included register-tool. This makes our work easier and your registration will be done much faster.

## 1.8 Restrictions of this unregistered version

Restrictions of this unregistered version

-----

The unregistered version of BoulderDäsh has some limitations:

---

\textdegree{} Only the first levels of each game are playable.

\textdegree{} C64 and Atari level loader are not available.

\textdegree{} You are not allowed to modify start level and the number of lives.

\textdegree{} The replace menu of the game editor is not available.

After registration all this features are full available.

## 1.9 How to Install BoulderDäsh

How to Install BoulderDäsh

-----

To install BoulderDäsh please use the original Commodore Installer. It creates a directory, in which BoulderDäsh is installed.

If you do not like BoulderDäsh, you can delete the whole drawer to destroy BoulderDäsh completely.

Assigns, path-adjustments or insertments into the User-Startup are not necessary. Only if you are so enthusiastic, that you want to start BoulderDäsh in the User-Startup. (-8

## 1.10 How To Play

How To Play

-----

After you have started a game, the screen scrolls to a blinking block, the In.

After some seconds it explodes. Rockford appears here, the hero of the game. It is possible to decrease this delay by moving the stick in one direction.

His task is the following one: He has to collect a determined number of diamonds in a determined time and must then move to the Out to leave the level.

It is very simple. After installing BoulderDäsh the default game (BDash\_I\_Levell.game) is selected. This game is a perfect beginner game and it should explain any questions.

Keyboard Functions

-----

With the cursorkeys you can move Rockford via keyboard. The keys Shift, Alt and Amiga have the function of the firebutton.

---

If you get into a situation with no way out, you can blow up Rockford by pushing the ESC-key. After each loss of Rockford it is the turn of the next player. If you play alone, it is logically your turn.

Press the spacebar to activate and deactivate the pause.

You are able to return to the Workbench by using the help key. If you click onto the workbench menu point you can continue your BoulderDäsh game. NOTE: This is only available if RTG is disabled! During RTG mode switch the Screen by using Amiga-M

Pressing left Amiga and "M" is like pressing help!

By pressing F1/F10 you can leave the game immediately and get back to the menu or leveleditor. There is no way to continue the game !!!

The following keys are for the music player. For further information consult the music player chapter.

Press the "M" key to cycle the music playing mode. These playing modes are used: "Effects only", "Music only" , "Music and Effects". Note: Depending on the module not all modes are available.

"1" : Music player on/off

"2" : Next music

"3" : Previous music

"4" : Change play mode.

"5" : Change music prefer mode.

## 1.11 The Game Elements

The Game Elements

---

If it is not mentioned in another way all elements have the following properties:

```
\textdegree{} disappear, if they explode
\textdegree{} Flies, ghosts or rockford cannot run through them.
\textdegree{} stones, diamonds and eggs are unable to tilt down on one side
```

Ground	
Space	Space - Fake
Diamond	Stone
Egg	
Metal	Metal - Fake
Wall	Magic Wall
Growing Wall - (left/right)	Growing Wall - (up/down)
Water	Slime

---



Butterfly	Firefly
Stonie	
Rockford	Rockford Twin
In	Out
Out - blinking	Out - Fake
User Block	Gravitation Arrow
Space Background	

## 1.12 Elements: Ground

Ground  
-----

Rockford can run through it and a space is left on this place.  
Stones, Diamonds and eggs lay on the ground and cannot tilt down at one side.

## 1.13 Elements: Space

Space  
-----

Allows diamonds, stones, eggs, Flies and rockford free movement.

## 1.14 Elements: Space - Fake

Space - Fake  
-----

This space works exact like a wall but it is invisible.

## 1.15 Elements: Diamonds

Diamonds  
-----

Can be collected by rockford.

## 1.16 Elements: Stones

Stones  
-----

Rockford can push them vertical to the gravitation, if there is a space behind the stone in that direction, it should be pushed.

---

## 1.17 Elements: Eggs

Eggs

-----

An egg is working like an stone. But there is one execption. If you drop a stone, diamond or an other egg on it, the egg breaks and a diamond appears.

## 1.18 Elements: Metal

Metal

-----

Metal can not explode.

## 1.19 Elements: Metal - Fake

Metal - Fake

-----

Acts like metal, but it is able to explode.

## 1.20 Elements: Walls

Walls

-----

Is only an obstacle and does not help in any way. stones, diamonds and eggs are able to tilt down on one side, if it is allowed by the environs. ↔

## 1.21 Elements: Magic Wall

Magic Wall

-----

If a stone falls down on a magic wall and underwards the wall there is a space, so the wall becomes active and changes the stone into a diamond. In return a diamond passing the magic wall changes into a stone. An egg will be tranformed into an firefly. If there is no space underwards the magic wall stones, diamonds and eggs passing it will be absorbed. The length of active time of a magic wall can be given different in any level. If the magic wall has switched off itself, it cannot be activated again.

---

## 1.22 Elements: Growing Wall (left/right)

Growing Wall (left/right)

-----

As soon as this element discovers a space left or right next to it, it grows in this direction.

## 1.23 Elements: Growing Wall (up/down)

Growing Wall (up/down)

-----

As soon as this element discovers a space up or down next to it, it grows in this direction.

## 1.24 Elements: Water

Water

-----

Water grows after a defined growing rate and spread through ground and space.

As soon as a defined quantity of water is reached, all water elements turned to stone.

If there is no way for the water to grow more, then it will turn to diamonds. But there is one exception: If the water was never able to grow nothing happens until one grow.

Some levels are using a special feature. If a magic wall is activated all water will turn into diamonds.

## 1.25 Elements: Slime

Slime

-----

Slime permits diamonds, stones and eggs to go through it , because it is viscous. This viscosity can be adjusted. This only takes place, if there is a space under the slime.

## 1.26 Elements: Butterflies

Butterflies

-----

Moves through the spaces of the whole level. If they touch water or are crashed with a stone, they explode to nine diamonds.

See also: firefly, stonie

## 1.27 Elements: Fireflies

Fireflies

-----

Moves through the spaces of the whole level. If they touch water or are crashed with a stone, they explode to nine spaces.

See also: butterfly, stonie

## 1.28 Elements: Stonie

Stonie

-----

Stonies are very social. If they are hit by a stone or touch water, they explode to nine stones.

Both things only happen if they are not asleep. Stonies stay as long asleep as the stone is without movement, so the stone cannot fall down. A sleeping stonie acts like a normal stone and can be pushed by rockford as well.

Once awoken stonies move through the spaces of the whole level.

See also: butterfly, firefly

## 1.29 Elements: Rockford

Rockford

-----

Can be moved by yourself. Rockford can move through space and ground.

If Rockford crosses ground, afterwards there will be space. If you press the fire button, Rockford frees the place next to him. He can remove one element ground in every direction without moving himself.

If there is a stone, egg or a sleeping stonie horizontal next to Rockford and behind the stone there is a space, Rockford can push this stone(-ghosts). With the fire button Rockford can push the stone

---

without movement.

There is danger for Rockford because of killing by butterflies and fireflies. If this happens Rockford explodes.

### 1.30 Elements: Rockford - Twin

Rockford - Twin

-----

He looks like rockford. If he thoughts a butterfly or a firefly, the Rockford-Twin explodes, and with him Rockford himself, too. The twin must be protected by rockford.

### 1.31 Elements: In

In

-----

rockford enters the level with the help of this element. There may be a few Ins in one level. If this happens, many rockfords enter this level. All rockfords are directed by the player simultaneously.

### 1.32 Elements: Out

Out

-----

This is the exit of the level. But it isn't blinking!

### 1.33 Elements: Out - Blinking

Out - Blinking

-----

This out works exactly like a out, but this time it started blinking, if all diamonds are collected.

### 1.34 Elements: Out - Fake

Out - Fake

-----

Starts blinking, if all diamonds are collected. But it is not an exit.

---

## 1.35 Elements: Gravitation Arrows

Gravitation Arrows

-----

This element is present in each direction once. If rockford runs again such a block, the gravitation changes in the direction of the arrow on the element.

## 1.36 Elements: User Block

User Block

-----

This element behaves like a normal wall.

## 1.37 Elements: Space Background

Space - Background

-----

This Element is only important, if you want to create own caves. If you are a Player then skip this part.

Space - Background is always empty but rockford is not able to move through this element. Do not use this Block to create a labyrinth or something like this, because the user (player) is able to select an other graphic set via game settings and override your specified graphic set. For example "FutureAmiga" this Block is empty, but the real space is full of stars.

What are this Blocks good for?

Since BoulderDäsh 3.0 and on an request by Thomas Sahling it is possible to remove the Level border. If you define a level that looks like a Circle, than you need something around. spaces need cpu time, because there is always an animation, even if you can not see this. In addition to that space animations are not wished every time. Short: If you want to fill an area with space and rockford is not able to enter this area, then use this block.

If this is not 100% clear then keep a look on the included level "BoulderDäsh/Little.int".

## 1.38 Own Graphic Sets

Own Graphic Sets

-----

---

Beside the enclosed~graphics you can create own graphics, too. All you need is a paint program and some talent.

If you have created own graphics, you can send them to me and I will admit them into my archive, after some testing.

All graphics of BoulderDäsh are Lores-IFF-pictures. Each picture consists of a complete graphic. So load a picture and change the graphic then.

Some advice you should read first, because this advice can save you a lot of annoyance and work.

#### 1. picture size

The picture should have the loosening Lores with 8 or 256 colors and should not consist of masks. BoulderDäsh should not have problems with other sizes, but these pictures will need a lot of needless space on your hard disk. 256 Color graphics are available in RTG Mode only. The first color is always black. Do not modify colors 0 and 248-255. These colors are reserved for later use and may change. If you want to create a graphic set that is OCS/ECS/AGA compatible 8 colors are the limit.

#### 2. Block Size

Every block consists of 16\*16 pixel.

#### 3. The position of the single elements

The arrangement of the single blocks is very simple. So please look at the added graphics. If you need a little help, please look at the Table.

#### 4. Scanner

The scanner is a feature, which is integrated into the routine of loading. So we take the animation of Rockford, for example. You paint an animation to move Rockford to the left and then, if you load BoulderDäsh, it recognises, that you have not painted the animation to move Rockford to the right. Now BoulderDäsh copies the animation for the left and turns it around. This work also the other way round.

The following blocks will be copied :

Metal <=> Fake\_Metal <=> Metal\_Moving\_Block  
Stone <=> Stonie asleep  
Wall <=> Growing Wall left/right <=> Growing Wall up/down  
Rockford left <=> Rockford right (all Animation-steps)  
Diamond\_0 <=> Egg\_0 <=> Egg\_1 <=> Egg\_2 <=> Egg\_3

From each of these types, there must exist one of the equivalents. If there is a type missing, than the requester sends the message: "Graphic incomplete"

Out <=> Fake Out <=> In (not only open, but also closed)

---

If there does not exist any type of In/Out, then the closed type consists of metal.

IMPORTANT :

Each copy within a block cannot take place, if there is a pixel in it, which is not the colour of the background.

Each block, which only consists of the colour of the background, is empty.

All block, which are not mentioned here, must be available to start the game.

#### 5. Animations

For all animations there is space for eight steps. If you need less than eight steps for your animation, please take a zero (colour of the background) for all steps you do not need and the animation will be ended earlier. Please pay attention the fact, that after an empty block all the other graphics of this animation will be ignored.

#### 6. Speed of the Animations

The speed for every animation can be adjusted. This is possible by adjusting of the Tooltypes in the info-data of the particular graphic-data.

#### 7. The Colors

It is possible to create a colorful graphic set by using the Tooltypes and the ColorSetHandler.

## 1.39 The Included Graphics

The Included Graphics

Here is a list of the single graphics and their authors :

Guido Mersmann :

ClassicAmiga.gfx  
FutureAmiga.gfx

Joona Palaste :

Arctic.gfx  
Black&White.gfx  
Christmas.gfx  
Computer.gfx  
Egyptian.gfx  
Fantasy.gfx  
Funky.gfx

---



```
Icons.gfx
Jewel.gfx
JokeAmiga.gfx          ;like ClassicAmiga but everything twisted
LCD.gfx                ;my favourite
Medical.gfx
Moria.gfx
Neon1.gfx
Neon2.gfx
PacMan.gfx
Pastel.gfx
Psychedelic.gfx
Small.gfx
Space.gfx
Spooky.gfx
Techno.gfx
UnderWater.gfx
Western.gfx
```

Beastmaster :

```
ClassicC64.gfx
ClassicC64Pumpkin.gfx
FutureC64.gfx
```

Thomas Richter :

```
Lemmings.gfx
```

Thomas Richter2 :

```
Classic800XLPro.gfx
```

Marko Suominen :

```
Graveyard.gfx          ;This is brilliant!!
```

Timo Hegemann :

```
Habich256.gfx          ;This is brilliant (256 Colors)
Habich64.gfx
Grablinge256.gfx       ;This is brilliant (256 Colors)
Grablinge64.gfx
```

I want to thank all authors again.

Sometimes I have changed the arrangements of the graphics or added new ones to support new features.

## 1.40 Own Character Sets

Own Character Sets

Beside the enclosed~character sets you can create own Characters, too.  
All you need is a paint program and some talent.

The font is formatted in Lores with 1 plan and should not be filed in another way. BoulderDäsh can load other formatted graphics, but this files are needlessly long and reading them takes much more time.

Each symbol is 16 Pixel wide and 8 Pixel high.

## 1.41 The Included Character Sets

The Included Character Sets

---

Here is a list of the single character sets and their authors :

Guido Mersmann :

ClassicAmiga.fnt

FutureAmiga.fnt

Beastmaster :

ClassicC64.fnt

FutureC64.fnt

Marko Suominen :

Graveyard.fnt ;fantastic! Try this with Graveyard.gfx !!

I want to thank all authors again.

Sometimes I have changed the arrangements of the characters or added new ones to support new features.

## 1.42 Own Sample Sets

Own Sample Sets

---

If you have an own sampler and adequate software, you can create own samples for your BoulderDäsh game.

Create a new drawer in the directory "SampleSets" and copy your samples to this drawer. In the Game~Settings you can now choose your sample sets and you can hear your own samples while playing.

But you must pay attention to some important things:

- 1.The samples must be in IFF 8SVX format. This shouldn't be a problem, because nearly every software generates this format. for Amiga it is the most used format.
-

2. "Diamond" and "TimeOut" should sound right for c octave 2. For the MED sampler this adjustment is default. C-2 corresponds to a hardware period of "428".

3. BoulderDäsh also realizes which samples do exist. This are the supported sounds and their qualities:

\textdegree{} "LevelIn"-Sound and "LevelOut"-Sound depend on each other. So if ←  
 one of  
 them doesn't exist, it will be replaced by the other one. This means,  
 that after collecting the last needed diamond the "LevelIn"-Sound  
 appears, if you don't have a "LevelOut"-Sound.

\textdegree{} "StonePush"-Sound is also replaced by the "Stone"-Sound, if it ←  
 doesn't  
 exist.

\textdegree{} "GravitationArrow"-Sound is also replaced by the "Collect"-Sound, ←  
 if it  
 doesn't exist.

At the moment BoulderDäsh supports following sounds:

"Explosion.SND"	(I don't know (-8 )
"Stone.SND"	(Stone falls)
"Diamond.SND"	(Diamond falls)
"TimeOut.SND"	(TimeOut Sound)
"Dig_Space.SND"	(Digging through space)
"Dig_Earth.SND"	(Digging through earth)
"Water.SND"	(is played cyclic)
"MillingWall.SND"	(is played cyclic)
"Collect.SND"	(Rockford collects a Diamond)
"LevelIn.SND"	(Rockford appears into the level)
"LevelOut.SND"	(collection of the last needed diamond)
"StonePush.SND"	(sound for pushing)
"StonePushFailed.SND"	(sound for failed push)
"GravitationArrow.SND"	(ONLY if gravitation changed by Grav.arrow)
"Background.SND"	(is played cyclic)

The names of the sounds must be written right. Otherwise BoulderDäsh doesn't find them.

## 1.43 The Included Sample Sets

The Included Sample Sets

---

Here is a list of the sample sets and their authors :

Guido Mersmann :

Classic (Original C64 Sounds)

---

Thomas Sahling :

Classic800XL            (Original Atari 800XL Sounds)  
Future                   (Selfmade)

Marko Suominen :

GraveYard

Thomas Richter2 :

Classic800XLPro        (Original Atari 800XLPro Sounds)

I want to thank all authors again.

Sometimes I have changed the arrangements of the samples or added new ones to support new features.

## 1.44 Own Music

Own Music

-----

Beside the enclosed~modules you can create your own game music, too. All you need is a ProTracker compatible music editor and some talent.

If you have created own module, you can send them to me and I will admit them into my archive, after some testing.

After creating a music you must specify unused or not so important voices via ToolType. This allows BoulderDäsh to use as much voices as available for in game effects.

## 1.45 The Included music

The Included music

-----

Here is a list of the single modules and their authors :

Guido Mersmann :

BoulderDäshClassic.mus

Ruben Monteiro :

InGame1.mus  
InGame2.mus  
InGame3.mus

---

InGame4.mus  
TitleAmiga.mus

I want to thank all authors again.

## 1.46 FAQs

FAQS

-----

The Keyfile:

What is a keyfile?  
Where should I place the keyfile?

The game and level editor:

After playing a while BoulderDäsh denies keyboard usage!  
The keyboard control is not very useful!  
BoulderDäsh does not run!  
Why can't I start BoulderDäsh and the Level editor?  
Memory problems on game start, but the level editor works fine!  
Why it isn't possible to run the level editor?  
While playing sometimes mysterious mistakes in the spaces appear!  
All included games are using the same color!  
All included intermissions are to big!

Game settings:

How can I change the RTG game/title screen mode?  
Changing start level and lives is not possible!  
The player names are lost!

Hiscres:

I don't understand the Hiscres!  
Where are my scores, if I load a new game?

Music player:

The Musikspieler isn't working!

Record and Playback of caves:

Why is the play feature not always working?

Own games and levels:

Own levels!  
After starting a level, Rockford does not appear. Why?  
The structure of the game!

Own graphic and color sets:

```
In my own~graphics all animations are wrong!
My animations are too short!
What is a Chunk?
CMAP-Chunk not found!
BODY-Chunk not found!
BMHD-Chunk not found!
```

## 1.47 FAQ - What is a keyfile?

```
What is a keyfile?
-----
```

A keyfile is a very small file. In the most cases it is not longer than 512 byte.

These files contain specific information about the owner and a lot of security data.

Placed correctly this little file works like a key. It is enabling features or disabling nerv requester.

Do not copy your keyfiles to other people, because you are the owner and only you got a licence to use the programm using this key. It is very easy to find the original owner of an keyfile, even if it is patched, so be as careful as it is your home key.

## 1.48 FAQ - Where should I place the keyfile?

```
Where should I place the keyfile?
-----
```

There a several possible positions:

```
"S:BoulderDäsh.key"           ;the script drawer
"BoulderDäsh/BoulderDäsh.key" ;the program drawer
"BoulderDäsh/Keyfile/BoulderDäsh.key" ;the programm/keyfile drawer
```

## 1.49 FAQ - After playing a while BoulderDäsh denies keyboard usage!

```
After playing a while BoulderDäsh denies keyboard usage!
-----
```

This problem effects non RTG mode only!!

BoulderDäsh is running in multitasking since version 3.56! This may cause problems, because BoulderDäsh is using the blitter hardware very intensive (up to 11000 blitter copies each second (NTSC 13200)), so there is no time for system blitter action.

If the operating system is trying to use the blitter it is going to

---

sleep until the blitter is free. BoulderDäsh is using the input.device for keyboard input and if the OS is sleeping there is not device activity. The point is, that you MUST stop all programmes that open/close windows or use the graphics.library (blitter) in any way.

In the most cases these programmes are Workbench Eyes, Clock tools and of course awakener tools.

In such situation press the left mouse button to quit the game.

## 1.50 FAQ - The keyboard control is not very useful!

FAQ - The keyboard control is not very useful!

-----

On slow systems it may happen, that the AmigaOS has not enough time to process the keyboard handling. In this cases the keyboard input is delayed and a good gameplay is impossible. There is no way to avoid this, because this is a step back.

The joystick control is always working perfect.

## 1.51 FAQ - BoulderDäsh does not run!

BoulderDäsh does not run!

-----

BoulderDäsh needs some libraries, which are added at the original Workbench. Please guarantee, that "asl.library" and "iffparse.library" are in the Libs-Directory.

## 1.52 FAQ - Why can't I start BoulderDäsh and the Level editor?

Why can't I start BoulderDäsh and the Level editor?

-----

If there are no levels in memory, this buttons are blocked. Please load a game, or create one level as minimum.

## 1.53 FAQ - Memory problems on game start, but the level editor works fine!

Memory problems on game start, but the level editor works fine!

-----

This problem effects non RTG mode only!!

This is all right. BoulderDäsh needs in a game the game size of the

---

biggest level and allocated this right at the beginning. If you edited in the Editor a size of 40\*22, so there can also appear a level with , for example, 40\*40 in this game. And in your case for this size there isn't ChipMem free. Try to close windows and screens to save ChipMem. If this doesn't help, quit BoulderDäsh as well and restart it, because of this ChipMem will be defragmented. If this also doesn't help, remove the big level out of the game.

## 1.54 FAQ - Why it isn't possible to run the level editor?

Why it isn't possible to run the level editor?

-----

To edit a level you must delete the original game or you must load a game you have created yourself. As soon as the original game is not any more in the editor, you have all possibilities of changing it.

## 1.55 FAQ - While playing sometimes mysterious mistakes in the spaces appear.

While playing sometimes mysterious mistakes in the spaces appear.

-----

This effect isn't a mistake, but it shows you, that you have just got a bonus life.

## 1.56 FAQ - All included games are using the same color!

All included games are using the same color!

-----

There are three cases in with this may happen:

\textdegree{} The LevelColor switch in the Game Settings - Data Sets-window is disabled. ←

\textdegree{} An icon file is missing. It is not wise to delete any BoulderDäsh icon, ←  
because they contain important information about music, title pictures and graphics. Without these information BoulderDäsh is not working perfect.

\textdegree{} You killed the colors by using a paint programm. BoulderDäsh is storing ←  
the different level colors in the picture file itself. For more information visit the chapter ColorSetHandler and the Chunk-FAQ.

---



## 1.57 FAQ - All included intermissions are to big!

FAQ - All included intermissions are to big!

-----

This problem effects non RTG mode only!!

The intermissions are 100% ok. It is the game. One additional screen line and the game is unplayable slow, so I decided to remove this line.

## 1.58 FAQ - How can I change the RTG game/title screen mode?

How can I change the RTG game/title screen mode?

-----

After saving the screen mode the screen mode requester only apears when pressing shift. So just press the key and start the game.

The title picture only apears on game startup, so switch title picture and RTG on. Don't forget to save the settings and quit BoulderDäsh. The next time you run BoulderDäsh via CLI or WB press the "Shift" key until the screen mode requester apears.

## 1.59 FAQ - Changing start level and lives is not possible!

Changing start level and lives is not possible!

-----

This feature is available for registered users only.

## 1.60 FAQ - The player names are lost!

The player names are lost!

-----

If you open in the Game~Settings the request button Name~Settings you can change the name. Afterwards you have to save the changing, to restore them for the next games.

## 1.61 FAQ - I don't understand the Hiscores!

I don't understand the Hiscores!

-----

In this game the aim is to absolve all caves. Theoretically someone with 1 score, who was defeated in cave 20 can be on place 1 of the hiscores.

---

## 1.62 FAQ - Where are my scores, if I load a new game?

Where are my scores, if I load a new game?

-----

They are on hard disk or floppy disk. Every game contains an own score list, because otherwise the statements of the highscores are too complex. If you load the old game again, your highscores will appear again.

## 1.63 The Musikspieler isn't working!

The Musikspieler isn't working!

-----

Several thing may go wrong:

\textdegree{} There is not enough memory to store the audio tracks. Disable the data cache via Game Settings to save memory. Do not run other programs! ←

\textdegree{} The music player isn't enabled. Change the music player state to "on" or "standby". ←

## 1.64 Why is the play feature not always working?

Why is the play feature not always working?

-----

Some timing problems may cause the play back not to be successful.

These timing problem ranges within micro seconds, but this little delay may cause a desaster. Under normal conditions this problem should only appear in caves containing milling walls, water and earthquakes.

You are able to avoid this problem! For example don't depend on a succeed milling during the last milling wall second. This may work on your machine, but on other faster/slower machines your record may cause that the milling wall isn't milling this stone.

But there is no way to avoid this bug in an water cave, when the water growing time expires. This rate change may come some misco seconds to early or to late, so there is no way workaround. In the most cases the water growing time indicates a game lost, so this bug doesn't matter.

I'll try to fix this problem, but it is not very easy. The ingame timing is very difficult.

---

## 1.65 FAQ - Own levels

Own levels

-----

If you create own levels, do not overload them. Taking less elements is mostly more than it seems. So please do not take all elements in one level, but create your own ideas and make the game more interesting because of this.

## 1.66 FAQ - After starting a level, Rockford does not appear. Why?

After starting a level, Rockford does not appear. Why?

-----

Every level needs an In. You have forgotten to set one while you have edited a level. Add this in the Level~Editor and Rockford will appear in the next game.

## 1.67 FAQ - The structure of the game

The structure of the game

-----

Intermissions should appear in regular intervals, to give the player the chance of involving these lives into the game. This will raise the charm of the game, because a player with no more lives, who knows that an intermission follows the present level, where he can get a bonus life, can survive a lot of other levels afterwards.

## 1.68 FAQ - In my own graphics all animations are wrong!

In my own~graphics all animations are wrong!

-----

BoulderDäsh runs all eight steps one after another. This means that it starts again, when the last step is reached. Please test, if this step is fluent.

## 1.69 FAQ - My animations are too short!

My animations are too short!

-----

Within animations there must not be empty blocks, because BoulderDäsh thinks this is the end of the animation.

---

## 1.70 FAQ - What is a Chunk?

What is a Chunk?

-----

Amigas IF-Format (IFF) is very special. For example a picture is separated in different sections called: Chunk!

Each section is defined by an 4 byte name, like "BODY". The "BODY" chunk contains only the pixel map of an picture. In a sound file this "BODY" contains the RAW sample. The "CMAP" contains only colors. And so on. For each Type of data there is a CHUNK.

The cheat is that there are no restrictions what chunk and how many chunks are included in one file. So it is possible to include sounds within a picture.

But what is a paint programm doing when loading a picture containing audio information? Well it is searching for picture information, so it is only reading the "ILBM" section, with means 'Picture'. The other unknown data (e.g. "8SVX" = Sample) will be ignored.

BoulderDäsh is using this feature to store additional color information within the graphic sets.

## 1.71 FAQ - CMAP-Chunk not found!

CMAP-Chunk not found!

-----

The CMAP-Chunk contains information about the colors. Normaly all pictures contain such a chunk. Look at the documentation of your painting program, in which way this information is saved into the picture.

## 1.72 FAQ - BODY-Chunk not found!

BODY-Chunk not found!

-----

The BODY-Chunk contains the real graphic. If this is missing, BoulderDäsh can't get information about the picture here. Look at the documentation of your painting program, in which way a picture is saved completely.

## 1.73 FAQ - BMHD-Chunk not found!

BMHD-Chunk not found!

-----

---

The BMHD-Chunk contains the format of the graphic. If this is missing, BoulderDäsh can't find the resolution of the picture. Look at the documentation of your painting program, in which way a picture is saved completely.

## 1.74 History

### History

-----

This text shows like a diary, what has been changed in the different versions.

- V1.0 1987 written at a weekend. It was my first programm at the A500!!! It was as fast as the original, but it wasn't able to fasten the speed of the game. This was optimised by more intelligent screen routines and an optimised move controller. The levels were firmly integrated and there were never more than 3, because otherwise I had to enter them in the source as "dc.b DT\_Metal,DT\_Wall..."
  - V2.0 1995 a complete new version (changing of the routines), addition of a move controller and an intelligent screen creation routine, that runs without Double Buffering.
  - V2.1 Addition of the LevelEditor, removement of some little bugs and adaption of the Lowlevel library.
  - V2.2 New routine for the falling of the stones with correct gravitation (for each direction one)
  - V2.3 Little corrections in the Interrupt Blitter Routine
  - V2.4 Little corrections in the routine of the falling stones. Stones also tilt down at the right side. (-8
  - V2.5 New initialisation and less memory needed. With this step the weakest point, concerning the stability of the system after ending BoulderDäsh was removed. With the help of the asyncfunctions a GUI created, with is an interface between the game and OS.
  - V2.6 Local texts and new mistake requester
  - V2.7 Scrolling mistake in oversized levels corrected.
  - V2.8 Enlarged graphics in the LevelEditor and new random-functions. Mistake (software failure) in the explosion of the twins corrected
  - V2.9 Little mistakes by changing from big to small levels corrected  
Little corrections in the Game-Editor  
Protection-protocol included. Now you can't start my levels any more.
  - V2.10 Graphic-interface included. From now on BoulderDäsh loads all graphics as IFF-picture.
  - V2.11 Graphic and animation-scanner included. All game settings can be saved. Pattern in the ASL Requester. Paths and patterns will be saved in the game settings.
  - V2.12 The graphic is completely now. Water looks like water and the magic walls are walls, that will be animated.
  - V2.13 Little mistakes corrected : Joycontroller, time-out, LevelEditor
  - V2.14 New gravitation arrows included
  - V2.15 Bad bug under OS2.x corrected : Found by Andreas Vierkant
  - V2.16 Small discrepancies with the original levels corrected and opting the LevelCompressor.
  - V2.17 Small changes in the LevelEditor and the window for the
-

## LevelSettings

- V2.18 Small bugs for the Icon Starting, the ASL-Requester and the LevelEditor corrected : found by Timo Hegemann
  - V2.19 Water adjustment and slime rate changed to percent
  - V2.20 Mistake in the number of players corrected. A player got a life to much indeed. (-8
  - V2.21 Addition of the highscorelist. Every game has its own highscores now.
  - V2.22 Small mistakes in the NameRequester and in the Hiscore-Save-Routine corrected. Play the game some times to fill the highscorelist. The player names will be saved with the prefs now.
  - V2.23 Again some mistakes in the highscore routines found. Furthermore a player with the same score in the same level will be added in the highscores after the player, who is already there.
  - V2.24 Modulo mistake in the LevelEditor corrected. From time to time the levels were distorted while depressing, if the running game contains a level , which was bigger then the one to edited. small discrepancies with the levelnumbers corrected. If you win in one game, for example, 20 levels and then also win the last one, the game starts again at the beginning and the levelnumber was set to 1. This isn't good for your place in the highscores. Now the levelnumbers will be counted on.
  - V2.25 Besides some small optings in the LevelEditor you can play the edited level in the testing mode endless, no difference, if you win the level or not. The level will return. The Tilulit-Effect can be switched off specially for the LevelEditor now.
  - V2.26 Mistake in the LevelSetting requester corrected.
  - V2.27 Mistake in the Scrollercontroller found, which appears in different level sizes in one game.
  - V2.28 Following the hint of Timo Hegemann a GameOver-Intercut after the last life was added. Furthermore the long existing mistake in the scroller function was corrected. Now you can always the entry of a cave, before Rockford appears.
  - V2.29 Game information requester added and making the game format safe for the future.
  - V2.30 New font routine added and creation of a font very similar to the original. IFF-Loader, prefs requester and prefs format adjusted. Mistakes in the magic wall corrected. New score line and game notices, which are very similar to the original. Mistakes in the game information corrected.
  - V2.31 Little corrections in the documentation and in the local data done. Small graphical corrections in the LevelSetting requester done. Mistake in the sounds giving out corrected : found by Andreas Vierkant
  - V2.32 Worked in the mistake of saving games. Now the game version number is also counting. Small opting in the IFFILBM routines. GameSettings enlarged. Now you can choose, which game will be loaded while starting BoulderDäsh. Now I have found a mistake, which is also in the first Aminet Version. Every time the first player is always announced. This gets a little bit difficult with two players in the end of a game.
  - V2.32 Small correction in the move controller. Now to original levels are more compatible and the feeling is better. Now you can't explode through a left-right movement under a stone by accident.
  - V2.34 Changed the stone-falling routine. Now the stone fall 100% original. Furthermore I have corrected the small disorientation of the
-

- LevelScoller at the beginning of a new level.  
Mistake in the time bonus corrected and adjustment of the bonus life function to the original. Addition of the DoubleScan switch into the GameSettings. Now the owners of screens, who can only show frequencies >30Khz, can play BoulderDäsh as well.
- V2.35 Now the ChipSet will be resetted by LoadView(zero). Perhaps DoubleScan will run now, too.  
300 (threehundred) new levels in 15 games added. Perhaps some levels are not playable, because the adjustment of the water/slime and the magic walls is missing.
- V2.36 Water and slime routine corrected. Now the water grows constantly and the slime is always pervious in the same way. Before this the rate falls by growing quantity of water (slime).  
Mistake by creating Rockford corrected. One line wasn't active because of a mistake in version 2.28 and hasn't been activated again.  
Mistake in the animationscroller of the magic wall corrected.  
Bonus life effect included.  
Changing water to diamonds by activating the magic wall included.  
Timing-problem within the start of the level corrected.  
The ghost-moving routine adjusted to the original. Now there are nearly no more incompatibilities. "Nearly no more", because all BoulderDäshs are different in the movement partly.  
A more efficient LevelCompressor included, which replaces the old one.
- V2.37 UserBlock finally included into the LevelEditor. Otherwise it would be senseless. The SpaceBlock can also be animated.  
Mistakes in the scroller by starting the level corrected. The ghosts already started moving while scrolling. So it could happen, that Rockford already exploded while he is created, because Rockford waited for the scroller, but not the ghosts.
- V2.38 Future-GFX included.  
The animation speed can the adjusted via ToolType for every graphic font.  
Mistake in the animation controller corrected.  
New icons created.
- V2.39 ExplosionRoutine improved.  
From now on all INs in a level will be supported. So all Rockfords coming out of an IN can be moved.  
Little improvements in the TwinRoutines.
- V2.40 Mistakes in the LevelScroller corrected, which only appears, if many Rockfords appear.  
Correction of a mistake by the creation of Rockford at the beginning of a level, which only appears with many Rockfords.
- V2.41 Now all twins explode, if a ghost thoughts them.
- V2.42 Modification in the protection protocol. Now also in the level frames In and Outs can be set.  
Small mistakes in the explosion routine corrected. Rockford could still explode in the Out.  
New PlayerName requester in the GameSettings included.  
Score texts are printed concentric automatically.  
Now the PlayerName can be distributed in stead of Player# optionally.  
Old name requester at the end of the game removed.  
New Hiscore routines included. Now there are 3 different hiscorelists for every game.  
Mistake in the linkage of the windows corrected.
-

- New LevelSetting requester included.
  - Mistake in the New routine found.
  - V2.43 Very stupid mistake in the installer script found and removed.  
Hiscore cycle gadget shows now only the three valid values.  
Old cheat removed and 3 new cheats added.
  - V2.44 New async-functions added.  
Old sound routine replaced.  
New water and milling wall samples.
  - V2.45 Added sample set prefs (requested by Hendrik Gels)  
Better asl.library handling
  - V2.46 Out-Error removed (reported by Silke Bormann)  
WaterMilling bug removed
  - V2.47 BoulderDäsh is playable by keyboard (requested by Sabine Lempert)  
New cheat added
  - V2.48 Some adjustments to stone movement routines  
Delete records implemented. (requested by Andreas Vierkant)
  - V2.49 Online help is now available via "HELP"-key
  - V2.50 Title picture and original title theme implemented
  - V2.51 Async-Requester module included and old requester routines removed
  - V2.52 Now it is possible to flip back to the Workbench while the game is paused. (requested by Hans Bergengren)
  - V2.53 Online help fixed ! (reported by Timo Hegemann)
  - V2.54 Titlepicture improved  
Keyfile support implemented!
  - V2.55 NTSC-title picture repaired ! (reported by Rickard Sandgren)  
New classic title picture implemented. (requested by Rickard Sandgren)
  - V2.56 Second "Load Game"-Button added! (requested by everyone (-8 )
  - V2.57 NTSC-game speed adjustment (reported by Rickard Sandgren)
  - V2.58 Many optimisations.  
Reassembled with Async-Functions 4.0
  - V2.59 Reassembled with Async-Functions 4.1
  - V2.60 Some minor changes.  
"BoulderDash II"-Game added.
  - V2.61 Little "Default settings" bug removed.  
OS2.0 Version caused a system crash if locale.library was not present. (Reported by Large)  
"Rockford's Revenge"-Game added.  
LoadGame error request fixed.  
Some problems with old C64-levels solved.  
All Rockford's are now able to push stones.
  - V2.62 Leveleditor-ClearLevel is working again.  
Score line modified.
  - V2.63 "Clear game"-function modified. => No Hiscore damages any longer.
    - | Original C64 colors for each level. (requested by every one)
    - | Unregistred version denies playing all levels.
    - | Unregistred version denied modifying start level and lives.
    - | 8 new games implemented. (Thanks to Peter Broadribb)
    - | 2 new sample sets (Thanks to Thomas Sahling)
    - | 1 new graphic set
    - | Sample handling bug fixed. (reported by Thomas Sahling)
    - | Virtual data handling. (Graphic, character and sample sets)
    - | Error requester fixed.
    - | Some new options.
    - | Choose graphic, character and sample set for each level.
    - | LoadLevel is able to load Original C64 Construction Kit Caves (registred version only)
-



- | 389 original C64-Caves included. (C64-Construction Kit Format)
- | Thanks to Peter Broadribb and Uwe Drichel
- | New sounds (StonePushFailed, GravitationArrow und Background)
- | Sample set loader is now able to extract periode from sample.
- | (requested by Thomas Sahling)
- | LevelEditor: You are allowed to edit the border. (requested by
- | Thomas Sahling)
- | Little manual rework.
- | New scroller option, to speedup scrolling. (requested by
- | Rudolph Riedel)
- | No longer blanker activation, if Boulderdäsh is returning to
- | workbench. (Requested by Silke Bormann [What's this?])
- | No longer soft freezer in pause mode. (-8
- | New Hiscore routines and format.
- | Some problems with C64-caves fixed.
- | New selector Keys. (level editor)
- | 2 new blocks (Space-Fake and Space-Background)
- | Fixed level editor animation problems. (Only with some GFX-Sets)
- | MillingWall symbol added. (little stone)
- V3.00
- V3.01 Little Bugfix. (unregistred only)
- V3.02 Some source code optimisations.
- |
- V3.04
- V3.05 Input.device handling fixed. Instead of one open and one close,
- this device was opened twice. If the game was played 9 time
- this causes an "ASL-requester auto close"-bug.
- [Reported by Michael]
- V3.06 Color sets implemented. Now you are able to select colors for your
- own levels .(During testing V3.0 there was not enough time to
- implement color sets.)
- V3.07 Small ToolType Bug removed.
- V3.08 Small game editor bug removed. An opened Level settings window
- causes am system crash after using the level editor.
- V3.09 Some game editor optimisations.
- V3.10 Color sets are now selectable via Level editor, too.
- Some internal optimisations.
- V3.11 Wrong Gadget replaced (File\_kind). Now it is possible to open
- the color set selection via PopUp\_kind.
- Forgot to sort after changing color sets name.
- Full FAQ-Guide rework.
- V3.12 Brrrrr! Forgot to reactivate some level editor routines. Since
- V3.10 it was impossible to create own levels. (reported by Michael)
- New random routines. (Water/Slime/Earthquake)
- V3.13 music routines implemented and
- | level support
- V3.20 adjusted.
- V3.21 Complete new preferences windows.
- | Now all settings are divided to
- | many windows and there is also a prefs files for each window.
- | This makes it easier to edit the preference and allows
- V3.50 me to do simple modifications.
- V3.51 Title picture is playing ProTracker modules.
- Additional to that, there is a music for each title mode.
- (Classic and Amiga)
- V3.52 Little window link bugs removed.
- V3.53 VBL-Frequenz is now calculated. Modified the ProTracker

---

- source to calculate SetSpeed commands correct.
  - V3.54 BoulderDäsh default configuration depends on system configuration
  - V3.55 ChipMem only music bug removed. (Reported by my good all A500-1MB)  
Some catalogs script optimisations
  - V3.56 BoulderDäsh is now able to load Atari-BoulderDäsh Construction Kit  
cave files. (Special thanks to Achim Haertel for the information)  
(registered version only)  
Level load error requests fixed!  
Some water optimisations and an old random generator removed.  
New Water feature added. (Special thanks to Achim Haertel for the  
information)  
Now it is possible to decrease the level in delay my moving the  
stick. This feature based on C64 features. (Again! Special thanks  
to Achim Haertel for the information)  
Installer rework. Now it should find BoulderDäsh in the most  
cases.  
Some music routine changes. Now it should work perfect.  
New "in line copy"-routine. This feature is needed for  
the internal music player. (Copy music during game)  
New path routines to clean up my old BoulderDäsh directory  
structure.  
Installer script fixed.  
ColorSet-Requester fixed. I hope it is now working perfect.  
Some ColorSet-Requester enhancements.  
Multitasking is now available.
  - V3.57 Now you are able to select between Music or Effects, if  
mixed mode is not available.  
Amiga-M is switching to Workbench
  - V3.58 Sound disabling fixed.  
Music player: continues and random play included.  
Audiochannel allocation included
  - V3.59 Interrupts and keyboard handling depends no longer on the  
lowlevel.library! This library is no longer needed.
  - V3.60 Music name viewer fixed.  
Load/save level path is now correct.  
Emergency exit implemented. It is working like F1/F10, but it is  
also working if the system is sleeping during blitter wait.  
(Left mouse button)  
Little keyboard bug fixed.
  - V3.61 Another keyboard bug removed.
  - V3.62 New 16/32 Bit Scroller and new rockford targeting.
  - V3.63 Some changes for upcoming RTG implementation.
  - V3.64 Graphic set loader is now able to convert planar -> chunky
  - V3.65 RTG Full screen scroller is working
  - V3.66 New text drawing functions. (RTG und ECS)
  - V3.67 Character set loader is now able to convert planar -> chunky
  - V3.68 Some changes for upcoming RTG implementation.
  - V3.69 RTG included.
    - | Some small bugfixes.
  - V3.75
  - V3.76 Some RTG level editor changes.
    - | Cursor control and block selection reworked.
    - | Some ECS functions enhanced.
  - V3.80 Screen preferences implemented.
  - V3.81 Other optimisations. (ECS and RTG functions)
    - |
  - V3.83
-

- V3.84 First version for beta testing.
  - V3.85 RTG: Now screens >320\*200 Points are working perfect.
  - V3.86 RTG: Constructions kit cursor blinking fixed.
  - V3.87 RTG: No longer mouse pointer trouble.
  - V3.88 Color sets are full available.
    - Catalogs and documentation reworked.
    - New Levelformat is handling the new color set format and converting the old.
    - Levels and color set updated.
    - Bug in game saver fixed.
    - Bug in graphics loader fixed.
    - Level editor error handling fixed.
    - UnBusyAllWindows does no longer delay.
  - V3.89 Full RTG multitasking implemented.
    - Construction kit block select cursor is now working perfect.
    - Construction kit block select isn't trashing any longer.
  - V3.90 FutureC64 graphic set reworked.
    - Color sets for the new FutureC64 created.
    - RTG: Score line colors fixed.
  - V3.91 RTG: Loader moved before open screen.
    - Small level loader bug fixed.
    - RTG: Title picture is now working on graphic boards.
  - V3.92 Double scroll speed is selectable for the level editor separately.
    - Full screen option is now working.
    - Some catalog changes.
  - V3.93 ECS: Standby mode is working again.
    - RTG: Mouse pointer blank should work now.
  - V3.94 ECS: Music player is working again.
    - C64 caves are colored again.
  - V3.95 RTG: Title pictures and the level window are centered now.
    - RTG: Score clear routine fixed.
  - V3.96 RTG: The screen mode requester title line is viewing more information about the requested screen.
    - Fake outs are invisible again.
    - Added 100 cave brutalao boulderdash game (20 caves \* 5 levels)
    - The combination stone-ghosts and water is working again. No longer system crashes. (reported by Thomas Richter)
    - A bonus-live-score of zero is now working (= bonuslive off). (reported by Thomas Richter)
    - The new input handler was making trouble, if more than one Rockford was in the cave. (reported by Thomas Richter)
    - Added game, graphics and character set by Thomas Richter.
    - No longer endless loops during switching from RTG to ECS Mode.
  - V3.97 New RTGMaster.library V23 is now required.
    - Some work arounds removed.
    - RTG: VBlank settings implemented.
  - V3.98 ColorSets wasn't working with V4 Levels, because the level file internal version count wasn't "4". All games are recompiled and working again. (Reported by Peter Schulz)
    - And there was a strange bug in the gfx-stuff. ColorSets wasn't changed until a new GraphicSet was used. (Reported by Peter Schulz)
    - I fixed the strange music bug. Now there aren't any longer noises if the music isn't ready during level startup.
  - V3.99 Small changes.
  - V4.00 Missing drawer added. No longer write protect errors when using CD editions.
  - V4.01 Two graphic sets and one character set included. (Thanks to
-

- Marko Suominen and Thomas Richter2)
- V4.02 Color sets are working perfect, even if other graphic sets are forced to be default.
- V4.03 The availability of the level color switch no longer depends on the level color switch. (game settings - Data sets)
- V4.04 Catalog fixes! Some keyboard shortcuts were defined twice.
- V4.05 ECS: Settings allow to force PAL or NTSC screen mode.
- V4.10 = V4.05
- V4.11 Stone ghost animation fixed. (reported by Timo Hegemann)  
Atari level color support implemented. (again)
- V4.12 "Game has been changed"-requester implemented.  
Menu added.
- V4.13 Hard Hiscore-Bug removed. (reported by Hans-Dieter Becker and Thomas Richter2. So Hans-Dieter: Now your daughter should be able to create games without further problems. With Thomas' help I was able to reproduce this very old bug.)
- V4.14 Hard deinstallation bug removed. (reported by Tony Belding)  
Game result requester implemented. (requested by Tony Belding)
- V4.15 New graphic set included.  
New C64 caves added.
- V4.16 Epilepsy warning included.  
The music player should work perfectly now. (no longer endless loops if there is no tune when the music player is switched on)  
Using the next/prev track function of the music player may cause crashes. (Thanks to all the writers for the bug reports)  
The Block Position Table was incorrect (reported by Markus Sauermann)  
The magic wall sound is working perfectly now. (reported by Markus Sauermann)  
The level editor is now longer returning to the upper left edge after testing a game. (requested by Markus Sauermann)  
Many documentation changes.
- V4.17 Another Sound bug removed. (reported by Markus Sauermann)  
RTG: BoulderDäsh should work again on GFX boards, if the title picture is enabled. I spend 4 hours on debugging to find the problem.  
SaveLevel is working again. (reported by Markus Sauermann)
- V4.18 "Replace"-Menu implemented. Now it is possible to replace all data sets by one command. (requested by Thomas Richter2)  
Complete game editor rework.  
The game editor menu enhanced.  
Many documentation changes.  
BoulderDäsh is saving all window positions when saving  
Game Settings - Screen  
ECS: The information characters of the level editor were misplaced. This bug appeared first when using the GraveYard-gfx.  
The Atari level colors weren't correct. (Reported by Thomas Richter2 (Sorry for the delay, but there were other more important problems to fix first.)))  
The uncontrolled animation of the Out & Magic Wall block is now part of history. (Thanks to Markus Sauermann for confirming this stupid bug)  
New game element! An egg. Drop a stone, diamond, or another egg on it and you'll receive a diamond.  
The audio channel allocation cause system crashes if other programs already had locked audio channels. (Reported by Juha Makinen)
-

Graphic set Diggers.gfx replaced by Grablinge.gfx and Habich.gfx.  
(Thanks to Timo Hegemann)

V4.19 The Replace sample set function fixed. (Reported by Thomas Richter2)

New color set system (again). The will be the final one. The colors are saved in the IFF file of the picture and you can edit them by using the ColorSetHandler.

The availably of the switch LevelColors no longer depends on the switch LevelData.

Fixed some error requester bugs.

Another SaveLevel rework. (bug reported by Markus Sauermann)

Fixed a little bug that created damaged Atari background colors.

Complete path handling rework. Now BoulderDäsh is starting several times faster.

V4.20 Hiscore-bug fixed. Some hiscore optimizations.

New "AddPath"-Tooltype. This allows to play CD versions and save scores to HD. In addition to that it is possible to update a CD installation without installing all files.

New SampleSet (Classic800XLPro) included. (Thanks to Thomas Richter2)

Self running demo implemented.

Online help is now supporting gadgets. So just press help above a gadget to get the gadget related help.

Manual strongly enhanced and bugfixed.

"B O N U S L I F E" text after each solved intermission. In addition to that the bonus life animation is activated.

Now it is possible to record and playback level solves.

This allows you to give the gamer a little help on your caves.

These Feature is only available for registered users.

The game timing depents no longer on VBlank speed. This means that the music, the game and all other visual output is always running at nearly the same speed on all systems. (VBlank Gadget removed)

The menu routines caused a bug that crashed MC68000 machines.

RTG: Screen center is now always working.

Reworked the game settings screen.

RTG: New switch: editor full screen.

RTG: Found the old bug that caused BoulderDäsh sometimes to crash.

FutureC64 Character Set fixed.

Reworked the old timing system to minimize play back.

## 1.75 Future

Future

-----

\textdegree{} Your personal wishes !!

## 1.76 Buglist

Buglist

-----

Keyboard problems! (Non RTG Only)

Earthquakes aren't working perfect. (no shaking effect)

## 1.77 Thanx

Thanx  
-----

First I want to thank Silke Bormann for writing the English translation.

Furthermore I want to thank Timo Hegemann, who made an AGA/RTG test on BoulderDäsh and gave me proposals for improvements and suggestions.

Many thanks to Steffen Haeuser for his great RTG system. If you are developing games then try this library first. It is very easy to use.

Special thanks to Eric Wick for RTG beta testing.

For beta testing, which shows some more mistakes, I want to thank Andreas Vierkant.

Also I want to thank Silke Bormann for her confused playing, that shows some more bugs.

Thomas Sahling for so many wishes, that I can't release V3 in time.

Thanks to Joona Palaste for the nice graphic sets:

Arctic	Black&White	Christmas	Computer
Egyptian	Fantasy	Funky	Icons
Jewel	JokeAmiga	LCD	Medical
Moria	Neon1	Neon2	PacMan
Pastel	Psychedelic	Small	Space
Spooky	Techno	UnderWater	Western

Thanks to Thomas Sahling for the nice sample sets:

Classic800XL    Future

Special thanks to Beastmaster for the original C64 graphic:

ClassicC64    FutureC64    ClassicC64Pumpkin

Thanks to Thomas Richter for his graphic set and game.

Lemmings.gfx    Small.fnt    TRI\_BD.game

Thanks to Thomas Richter2 for his 800XL graphics.

Classic800XLPro.gfx    Classic800XLPro.spl

Special thanks to Marko Suominen for his great stuff:

---

Graveyard.gfx Graveyard.fnt Graveyard.sampleset

Thanks to Timo Hegemann for his graphics:

Habich256.gfx      Habich64.gfx  
Grablinge256.gfx   Grablinge64.gfx

Thanks to Ruben Monteiro for the nice music sets:

InGame1            InGame2      InGame3  
InGame4            TitleAmiga

Thanks to Achim Haertel for Atari caves and cave format information.

Thanks to Peter Broadribb for the Web-pages and his support. He keeps Boulderdash alive.

## 1.78 The Author

The Author  
-----

If you find some bugs in BoulderDäsh, please send me a message, so that I can correct these bugs in the next version.

I will also thank you for suggestions to enlarge BoulderDäsh.

I will also welcome your own games, levels, graphic-, sample-, character sets and musics. I will add them in the new version after testing their quality. The author will also be mentioned. Please also complete the game information.

IMPORTANT: I don't send back floppy disks !!!

The best you can do is sending me the files via fidonet as Crash-Fileattached or via Internet.

The registration will be done by AD SG. So don't send me any registration stuff.

Guido      Mersmann  
Glatzer Straße 12  
48477      Hörstel  
            Germany

FIDONET : 2:2449/246.15  
INTERNET: geit@studST.FH-Muenster.DE

## 1.79 All BoulderDäsh Windows

---

All BoulderDäsh Windows

-----

- The Main Window
  - The Game Editor
    - The Level Editor
      - Level Settings
        - Levelsettings - Visual and Noisy
          - Color Set Selection
        - Level Settings - Water and Slime
        - Level Settings - Earthquakes
        - Level Settings - Points
        - Level Settings - Miscellaneous
  - The Game Information
- The Game Settings
  - Game Settings - Player Names
  - Game Settings - Data Sets
  - Game Settings - Music Player
  - Game Settings - Screen
  - Game Settings - Miscellaneous
- Highscores
- Game Results

## 1.80 The Main Window

The Main Window

-----

This window is the centre of BoulderDäsh. The Close-Gadget ends the game.

There is also a special menu.

## 1.81 The Main Window - Game Editor

Game Editor

-----

Opens the game~editor window, where you can create your own games.

## 1.82 The Main Window - Game Settings

Game~Settings

-----

This button opens the game Setting window, where you can configurate BoulderDäsh in the way you want.

---



### 1.83 The Main Window - Hiscores

Hiscores

-----

With this button you get into the hiscore list of the loaded game.

### 1.84 The Main Window - Load Game

Load Game

-----

After the choice in the file requester a game with its levels will be loaded. All levels, that were in the memory, will be deleted.

### 1.85 The Main Window - Start Game

Start Game

-----

Starts the loaded BoulderDäsh game. Before starting you should enter the names of the players in the playernames requester.

### 1.86 The Main Window - Quit Game

Quit Game

-----

This gadget quits BoulderDäsh and closes all open windows, which belong to BoulderDäsh.

### 1.87 The Game Editor

The Game Editor

-----

With the GameEditor you can put together to a game as much levels as you want and save them as a game.

The game editor isn't working with the original games! So it is impossible to edit the original levels. Use Delete Game to remove the protection of the editor.

You should take a look on the game editors menu.

Level List

```
New
Delete
Level Up
Level Down
Edit Level
Level Settings
Game Information
Load Level
Save Level
Load Game
Link Game
Save Game
Delete Game
```

## 1.88 The Game Editor - Level List

```
Level List
-----
```

Here are all available levels listed. Also the current level is listed here.

The first level in the list is level 1, the second level is level 2.

## 1.89 The Game Editor - New Level

```
New
-----
```

Here a level with the size 40\*22 blocks is created and is added to the list. The size is equivalent to the original C64-Caves.

## 1.90 The Game Editor - Delete Level

```
Delete
-----
```

Deletes the current level

## 1.91 The Game Editor - Level Up

```
Up
-----
```

Moves the current level one entry up.

---

## 1.92 The Game Editor - Level Down

Down  
-----

Moves the current level one entry down.

## 1.93 The Game Editor - Edit Level

Edit Level  
-----

Starts the Level~Editor.

## 1.94 The Game Editor - Level Settings

Level Settings  
-----

Opens the LevelSettings-requester.

## 1.95 The Game Editor - Game Information

Game Information  
-----

Opens the GameInformation-requester

## 1.96 The Game Editor - Load Level

Load Level  
-----

Opens an ASL-requester, in which you can choose the level, that you want to load. The level will be added in the level list at the end after loading.

It is also possible to load C64 (498 Bytes) and Atari (504 Bytes) "BoulderDash Construction Kit Caves".

The foreign cave formats are only available for registered users!

---

## 1.97 The Game Editor - Save Level

Save Level  
-----

Saves the currently chosen level. The LevelName is given as FileName in the ASL-requester.

## 1.98 The Game Editor - Load Game

Load Game  
-----

After the choice in the file requester a game with its levels will be loaded. All levels, that were in the memory, will be deleted.

## 1.99 The Game Editor - Link Game

Link Game  
-----

Like LoadGame all levels of the new game will be added to the levels of the game, which is already in the memory.

## 1.100 The Game Editor - Save Game

Save Game  
-----

Saves all levels in one data. So the levels needn't be saved particular.

If you press the Control-key simultaneously, you save the level with protection identification. This protection can't be removed. So please save the game only protected, if you want to give it to another person, or if you are sure, that no more changes are needed.

## 1.101 The Game Editor - Delete Game

Delete Game  
-----

With this option you can delete all levels, that are in the memory. Before this happens a security requester appears.

---

## 1.102 Game Settings

Game Settings

-----

This Window is divided into two parts. On the top there are buttons to enter other preferences and in the bottom of this window there are some often used settings.

Player Names  
Data Sets  
Music Player  
Screen  
Miscellaneous  
Number of Player  
Number of Lives  
Start Level  
Ok  
Save  
Cancel

## 1.103 Game Settings - Player Names

Player Names

-----

This button opens the Player Name~Settings~requester, in which you can enter all player names and where you can make further adjustments.

## 1.104 Game Settings - Data Sets

Data Sets

-----

By using this button the Data Set~requester is opening.

## 1.105 Game Settings - Music Player

Music Player

-----

To configurate the internal music player use music player settings.

## 1.106 Game Settings - Screen

Screen

-----

By using this button the screen configuration-requester is opening.

## 1.107 Game Settings - Miscellaneous

Miscellaneous

-----

The window that opens here is filled with useful options.

## 1.108 Game Settings - Number of Players

Number of Players

-----

Here you can adjust the number of players, who join the game. After each life there is a change. (The exceptions are intermissions)

## 1.109 Game Settings - Number of Lives

Number of Lives

-----

Here you can adjust the number of lives, the players will have in the following games. Only if BoulderDäsh is played with "3" lives, it is possible to reach the game scores.

This gadget is available for registered user only.

## 1.110 Game Settings - Start Level

Start Level

-----

With this slider you can adjust the level, in which the game should start. Only if this gadget views "1", it is possible to reach the game scores.

This gadget is available for registered user only.

---

### 1.111 Game Settings - Ok

Ok

-----

This adjustments will be overtaken.

### 1.112 Game Settings - Save

Save

-----

This adjustments will be saved and the requester will be existed.

### 1.113 Game Settings - Cancel

Cancel

-----

The adjustments will be rejected. The close gadget does the same.

### 1.114 Game Settings - Player Names

Game Settings - Player Names

-----

In this requester you can enter the player names and make other adjustments.

Names

Names on Level Startup

Show Score Results

Ok

Save

Cancel

### 1.115 Player Names - Names

Player 1 - (6)

-----

Here you can enter the names of the single players. These names will appear in the highscorelist and will be shown, if you enter an level.

---

### 1.116 Player Names - Names on Level Startup

Names on Level Startup

-----

In this checkbox you can adjust, if the player "name" or only "player X" should appear while changing the levels.

### 1.117 Player Names - Show Score Results

Show Score Results

-----

This switch is enabling a result window. This window is viewing all player scores after playing BoulderDäsh.

### 1.118 Player Names - Ok

Ok

-----

This adjustments will be overtaken.

### 1.119 Player Names - Save

Save

-----

This adjustments will be saved and the requester will be existed.

### 1.120 Player Names - Cancel

Cancel

-----

The adjustments will be rejected. The close gadget does the same.

### 1.121 Game Settings - Data Sets

Game Settings - Data Sets

-----

Data Cache  
Level Data

---



```
Level Color
Default Grafik Set
Default Character Set
Default Sample Set
Default Musik
Ok
Save
Cancel
```

## 1.122 Data Sets - Data Cache

Data Cache

-----

This Gadget is very important. It specifies how BoulderDäsh is keeping graphic, character and sample sets, while you are not playing:

["In game" and "game start" mean the started game/starting the game and not starting the program "BoulderDäsh" via Workbench/CLI.]

"off":

The data sets are always lost and must be loaded at every game start. You should activate this option only, if you haven't very much memory, or you create own graphic sets, own sample sets or own character sets. This is necessary, because BoulderDäsh is loading the actual data sets every time from disk or harddisk.

"only needed":

If this option is activated, BoulderDäsh is holding all data sets, needed to play the actual game.

"all":

BoulderDäsh is holding all data sets in memory. With enough memory, this option rejects most disk access, because all datas are already in memory.

## 1.123 Data Sets - Level Data

Level Data

-----

Each level is requesting its own graphic, character and sample set. A deactivated gadget denies any request and the defaults are used.

## 1.124 Data Sets - Level Colors

### Level Colors

---

If enabled the in-game colors are used. Otherwise the graphic set default colors are used for each level.

## 1.125 Data Sets - Default Graphic Set

### Default Graphic Set

---

If BoulderDäsh is unable to locate a graphic set specified by a game level, this graphic set is used. A deactivated "Level graphics" function selected in this window forces this graphic set, too. It is possible to load own graphics.

## 1.126 Data Sets - Default Character Set

### Default Character Set

---

This Gadget specifies the character set, that is used in the score line, if the level character set is not found. A deactivated "Level graphics" function selected in this window forces this character set, too. It is possible to load own graphics.

## 1.127 Data Sets - Default Sample Set

### Default Sample Set

---

If BoulderDäsh is unable to locale a sample set specified by a game level, this sample set is used. A deactivated "Level graphics" function selected in this window forces this graphic set, too. It is possible to load own sample sets.

## 1.128 Data Sets - Default Music

### Default Music

---

This Gadget specifies the music, that is used, if the level music is not found. A deactivated "Level data" function selected in this window forces this music, too. It is possible to load an own music.

---

### 1.129 Data Sets - Ok

Ok

-----

This adjustments will be overtaken.

### 1.130 Data Sets - Save

Save

-----

This adjustments will be saved and the requester will be existed.

### 1.131 Data Sets - Cancel

Cancel

-----

The adjustments will be rejected. The close gadget does the same.

### 1.132 Game Settings - Music Player

Game Settings - Music Player

-----

Music List  
Audio Mode  
Prefer  
Music Player  
Play Mode  
Ok  
Save  
Cancel

### 1.133 Music Player - Music List

Music List

-----

This gadget contains all musics.

---

## 1.134 Music Player - Audio Mode

Audio Mode

-----

This is the default audiomode for in game music. If the "music and effect" mode is not available for a specified music, BoulderDäsh is using your preferred. (next gadget)

During the game you are able to modify this by pressing "M"!

## 1.135 Music Player - Prefer

Prefer

-----

If a music does not support the mixed mode, BoulderDäsh is switching down to this mode.

During the game you are able to modify this by pressing "5"!

## 1.136 Music Player - Music Player

Music Player

-----

This gadget is very simple.

"Off" : The music list tunes won't be loaded.  
"Standby" : Tunes will be loaded, but the player stays off.  
"On" : All musics will be loaded and Player is enabled.

During the game you are able to modify this by pressing "1"!

Note: If the music player is deactivated by this gadget, then it may not play if activated during the game, because there is no tune. The only exceptions is that one or more levels are using music player tunes. In this case you are able to play this tunes.

## 1.137 Music Player - Play Mode

Play Mode

-----

This gadget specifies the handling, if a music is played complete.  
"Repeat one" : One music is played forever.  
"Continues" : All musics one after another.  
"Shuffle" : All musics are played in a random way.

During the game you are able to modify this by pressing "4"!

---

### 1.138 Music Player - Ok

Ok  
-----

This adjustments will be overtaken.

### 1.139 Music Player - Save

Save  
-----

This adjustments will be saved and the requester will be existed.

### 1.140 Music Player - Cancel

Cancel  
-----

The adjustments will be rejected. The close gadget does the same.

### 1.141 Game Settings - Screen

Game Settings - Screen  
-----

RTG  
Full Screen  
Editor Full Screen  
Scroll Speed 2x  
Editor Scroll Speed 2x  
Screenmode  
Ok  
Save  
Cancel

### 1.142 Screen - RTG

RTG  
-----

This switch is only available, if the RTGMaster.library V23 and an 68020 as minimum is installed. It allows BoulderDäsh to use graphic boards with 256 colors.

---

### 1.143 Screen - Full Screen

Full Screen

-----

This check box is only available, if RTG is enabled.

Under normal conditions BoulderDäsh is using an 320\*200 screen. If you enable this switch BoulderDäsh allows screen sizes up to 1024\*1024.

### 1.144 Screen - Editor Full Screen

Editor Full Screen

-----

This check box is only available, if RTG is enabled.

Under normal conditions BoulderDäsh is using an 320\*200 screen. If you enable this switch BoulderDäsh allows screen sizes up to 1024\*1024.

### 1.145 Screen - Scroll Speed 2x

Scroll Speed 2x

-----

This gadget doubles the in game scrolling speed.

### 1.146 Screen - Editor Scroll Speed 2x

Editor Scr. speed 2x

-----

This gadget doubles the level editor scrolling speed.

### 1.147 Screen - Screenmode

Screenmode

-----

This gadgets allows to force a PAL or NTSC screen. In normal caves this gadget should stay on default.

This options is e.g needed, if you are using an flicker fixer and an multiscan monitor. Some monitors aren't able to synchronize 50hz (PAL) screens, so this feature allows to force BoulderDäsh to create an 60Hz (NTSC) output.

This gadget is not available in RTG mode.

---

## 1.148 Screen - Ok

Ok

-----

This adjustments will be overtaken.

## 1.149 Screen - Save

Save

-----

This adjustments will be saved and the requester will be existed.

This Gadget also saves the all BoulderDäsh window positions. It makes no difference if the windows are opened or closed. The last position will be saved. BoulderDäsh is loading these data on the next start an all windows are exactly where you left them.

## 1.150 Screen - Cancel

Cancel

-----

The adjustments will be rejected. The close gadget does the same.

## 1.151 Game Settings - Miscellaneous

Game Settings - Miscellaneous

-----

Default Game  
Title Picture  
Levelchanging Tilulit  
Simple Tilulit  
Editor Tilulit  
Ok  
Save  
Cancel

## 1.152 Miscellaneous - Default Game

Default Game

-----

The default game will be loaded automatically while starting BoulderDäsh. After installation this game is called "BDash\_I\_Level1.game".

---

### 1.153 Miscellaneous - Title Picture

Title Picture  
-----

Here you can select and disable the startup title picture.

### 1.154 Miscellaneous - Levelchanging Tilulit

Levelchanging Tilulit  
-----

With this button you can switch of the level changing effect.

### 1.155 Miscellaneous - Simple Tilulit

Simple Tilulit  
-----

Here the moving blocks in the level changing will be replaced by static ones. You can only click on this button, if the level changing effect is active.

### 1.156 Miscellaneous - Editor Tilulit

Editor Tilulit  
-----

With this button you can switch on the Tilulit for changing between GameEditor, LevelEditor and LevelEditor and TestingMode. Like the simple Tilulit this button can only be switched one, if the level changing effect is active.

### 1.157 Miscellaneous - Ok

Ok  
----

This adjustments will be overtaken.

### 1.158 Miscellaneous - Save

Save  
-----

This adjustments will be saved and the requester will be existed.

---



## 1.159 Miscellaneous - Cancel

Cancel

-----

The adjustments will be rejected. The close gadget does the same.

## 1.160 The Highscores

The Highscorelist

-----

Here the highscores of the current level are shown. The list will be saved automatically after every new entry.

The given scores are real. I hate imitated scores with the first place at a score 100000. So I have decided to add the scores played at my computer. So if you beat this scores you also beat myself and my testers.

There are three different highscore lists for every game.

\textdegree{} Game Records

The game records show the best 15 players.

The reached level is more important than the amount of score. If you reach level 4 and have a score of 5678, you will be added in the highscores before an entry with a score of 7890 in level 3.

\textdegree{} Level Records

In the level records there is shown the best player for every level. The score is shown, that the player has reached with that life, that he leaves the level.

\textdegree{} Time Records

Here is one entry for every level as well. So you must reach a shorter time.

Type

Delete Scores

## 1.161 The Highscores - Type

Type

-----

With this gadget you can adjust the list, you want to see.

---

## 1.162 The Highscores - Delete Scores

Delete Scores

After confirming all scores of the current games are deleted.

## 1.163 Game results

Game Results

After playing BoulderDäsh this requester is viewing all player information. (scores and level)

This window may be deactivated by the Playername-settings.

## 1.164 The Level Editor

The Level Editor

The chosen level will be shown in the level editor. The screen will be divided into two parts.

At the top there are all elements, which you can choose in the level. Please pay attention to the fact, that you can see only some of the elements, because you can scroll this selector.

At the bottom you can see the edited level itself.

Some elements are marked to be better recognised. Letters in the corner right up of the elements show you the type. "I" = in "S" = Slime etc.

An "F" in the left bottom of the element symbolises Fake, an imitation of the original block.

With the joystick you can move through the level and if you push the fire button you can set the element you have activated in the element selector.

Into the level frame you can only set the "In", "Out" and "Metall" elements.

Here are all keys, you can use in the level editor :

Esc	: Ends the LevelEditor
F1	: Testing a level (if you press F1 you can leave the testing mode)
Del	: and a following Y deletes the level
Help	: Counts all diamonds and registers them as needed.
F6	: The current element and distributes them 15 times in the level

accidentally.

NUMPAD 6: moves the element chooser one step right ( "-" for A600 users)

NUMPAD 4: moves the element chooser one step left ( "." for A600 users)

  

C : Space type selector:  
     \textdegree{} Space  
     \textdegree{} Space - Fake  
     \textdegree{} Space - Background

D : Diamond

S : Stone type selector:  
     \textdegree{} Stone  
     \textdegree{} Stonie

E : Ground

M : Metal type selector:  
     \textdegree{} Metal  
     \textdegree{} Metal Fake

W : Wall

P : Magic Wall

L : Growing wall left/right

U : Growing wall up/down

R : Water

G : Butterfly

N : Firefly

I : In

O : Out type selector:  
     \textdegree{} Out blinking  
     \textdegree{} Out not blinking  
     \textdegree{} Out fake

T : Twin

Q : Slime

1 : Gravitation Arrow Up

2 : Gravitation Arrow Down

3 : Gravitation Arrow Left

4 : Gravitation Arrow Right

5 : Userblock

  

F9 : Go to "Color Set Mode"  
     Use CRSR left/right to view the color sets. Use "Y" or "J"  
     to confirm, or use "N" or Escape to undo all changes.  
     NOTE: You are only able to activate the colors you have  
     created.

## 1.165 Level Settings

Level Adjustments

-----

This windows allows the adjustments of all variables, BoulderDäsh allows for a level.

Name  
 Visual and Noisy  
 Water and Slime  
 Earthquakes  
 Points

---

Miscellaneous  
Ok  
Cancel

## 1.166 Level Settings - Level Name

Level Name  
-----

The name of the level. This level is only needed for the level list at the moment.

## 1.167 Level Settings - Visual and Noisy

Visual and Noisy  
-----

This window link allows alle visual and noisy settings for this level.

## 1.168 Level Settings - Water and Slime

Water and Slime  
-----

Also this button opens a window. In this window you can make all adjustments, concerning Water~or~Slime.

## 1.169 Level Settings - Earthquakes

Earthquakes  
-----

Using the earthquake key opens a window that allows all adjustments concerning earthquakes.

## 1.170 Level Settings - Scores

Scores  
-----

The Score~Adjustment~Window, that will be opened, if you click at it, allows the editing of all scores, the player can get in this levels.

---

## 1.171 Level Settings - Miscellaneous

Miscellaneous

-----

This gadget opens the requester for miscellaneous things. Here you can adjust the width and height, level time, game speed and many more.

## 1.172 Level Settings - Ok

Ok

-----

With Ok the adjustment of all windows will be taken over and the level setting window will be closed. Windows, that were opened from here will be closed as well.

## 1.173 Level Settings - Cancel

Cancel

-----

Cancels all adjustments and ends all level setting windows.

## 1.174 Levelsettings - Visual and Noisy

Levelsettings - Visual and Noisy

-----

- Level Width
- Level Height
- Graphic Set
- Color Set
- Character Set
- Sample Set
- Music

## 1.175 Visual and Noisy - Level Width

Level Width

-----

Here the width of a level can be adjusted in elements.

WARNING : A CHANGING CAUSES THE LOSS OF THE JUST EDITED LEVEL SIZE !!!

---

## 1.176 Visual and Noisy - Level Height

Level Height

-----

Here you can adjust the height of a level in elements.

WARNING : A CHANGING CAUSES THE LOSS OF THE ALREADY EDITED LEVEL SIZE!!!

## 1.177 Visual and Noisy - Graphic Set

Graphic Set

-----

This gadget specifies the level internal graphic set. You can also use your Own~Graphics. Note: This Feature must be enabled via game settings.

## 1.178 Visual and Noisy - Color Set

Color Set

-----

This gadget allows to specify the color set for this level. The selection is made by the Color Set Selection-window. Note: This Feature must be enabled via game settings.

## 1.179 Visual and Noisy - Character Set

Character Set

-----

This gadget specifies the level internal character set. You can also use your Own~Graphics. Note: This Feature must be enabled via game settings.

## 1.180 Visual and Noisy - SampleSet

Sample set

-----

This gadget specifies the level internal sample set. You can also use your Own~Graphics. Note: This Feature must be enabled via game settings.

---

## 1.181 Visual and Noisy - Music

Music

-----

This gadget specifies the level internal music. You can also use your Own~Graphics. Note: This Feature must be enabled via game settings.

## 1.182 Color Set Selection

Color Set Selection

-----

This window allows to select new a new level color set.

Color Sets

Ok

Cancel

## 1.183 Color Set Selection - Color Sets

Color Sets

-----

This listview is showing all color sets. There are separate lists for each graphic set, so all shown color sets are valid for the current graphic set.

## 1.184 Color Set Selection - Ok

Ok

----

The current level is using the selected color set.

## 1.185 Color Set Selection - Cancel

Cancel

-----

The window is closed, without any modifications to the level colors.

---

## 1.186 Level Settings - Water and Slime

Level Settings - Water and Slime

-----

In this window you can make all adjustments concerning water or slime.

Water Growing Time  
Magic Water Time  
Water Growing Rate  
Water Flood Rate  
Water Maximum  
Slime Rate

## 1.187 Water and Slime - Water Growing time

Water Growing Time

-----

This time starts directly at the beginning of a level. In this time the water grows in the growing rate. Are the adjusted seconds over, it will be changed into the flood rate.

## 1.188 Water and Slime - Magic Water Time

Magic Water Time

-----

This time starts directly at the beginning of a level, too. In this time it is possible to change all water to diamonds by activating the magic wall.

## 1.189 Water and Slime - Water Growing Rate

Water Growing Rate

-----

Directly after the beginning of a level the water grows with this rate.

## 1.190 Water and Slime - Water Flood Rate

Water Flood Rate

-----

This rate will be activated, if the growing rate time is over.

---



## 1.191 Water and Slime - Water Maximum

Water Maximum

-----

With a special size the water turns to stone. Here you can adjust the percent of the level size, which must be flooded, to turn the water into stones.

## 1.192 Water and Slime - Slime Rate

Slime Rate

-----

Here you can adjust the speed, in which the stones, diamonds or eggs slime through the slime.

## 1.193 Level Settings - Earthquakes

Level Settings - Earthquakes

-----

Here you can make all adjustments concerning earthquakes. Earthquakes shake a level so that stones falling down, which normally won't fall down. For example, stones are fall down from earth or metal.

Mode  
Activate Time  
Delay  
Length  
Force Rate

## 1.194 Earthquakes - Mode

Mode

-----

Here you can adjust the mode, that causes the earthquakes. The following modes are available:

Off           - no earthquakes  
Random       - earthquakes appear randomly with random force and randomly long  
Once          - only one earthquake  
Cyclic        - earthquakes appear regularly

---

## 1.195 Earthquakes - Activate Time

Activate Time  
-----

After this time earthquakes can appear.

## 1.196 Earthquakes - Delay

Delay  
-----

In the mode regular you can adjust the time between earthquakes.

## 1.197 Earthquakes - Length

Length  
-----

This is the length of time the level is shaken by an earthquake.

## 1.198 Earthquakes - Force Rate

Force Rate  
-----

Here you can adjust the force of an earthquake.

## 1.199 Level Settings - Points

Level Settings - Points  
-----

Here you can add the scores for the different events while the level.

Diamond  
Diamond extra  
Diamonds >99  
For Bonus Live  
Time Bonus

## 1.200 Points - Diamond

---

Diamond

-----

Every diamond gives you the score, which is adjusted here.

## 1.201 Points - Diamond Extra

Diamond Extra

-----

If someone has collected all diamonds, he gets this score for every extra diamond.

## 1.202 Points - Diamonds>99

Diamonds>99

-----

For each diamond more than 99 you get this score.

## 1.203 Points - For Bonus Life

For Bonus Life

-----

Every time someone reaches this score, he gets a bonus life. If you add 1000 here, you get a new life every time, you add to your score 1000. The counter is limited to the current level, that means, if you loose your life at a score of 500, you only need a score of 500 to reach a life bonus.

Zero means no bonus live!

## 1.204 Points - Time Bonus

Time Bonus

-----

Here you can state how much score each second should give at the end of the level.

## 1.205 Level Settings - Miscellaneous

## Level Settings - Miscellaneous

---

Game Speed  
Level Time  
Magic Wall Time  
Diamonds Needed  
Intermission  
Gravitation

### 1.206 Miscellaneous - Game Speed

Game Speed

---

Here you can adjust the game speed.

### 1.207 Miscellaneous - Level time

Level time

---

Here you can adjust the amount of seconds a player should have to collect all diamonds and reach the Out.

### 1.208 Miscellaneous - Magic Wall Time

Magic Wall Time

---

Here you can adjust the amount of seconds the magic wall stays active after activation.

### 1.209 Miscellaneous - Diamonds Needed

Diamonds Needed

---

The number of the here adjusted diamonds are needed to finish the level.

### 1.210 Miscellaneous - Intermission

Intermission

-----

Intermissions are levels, in which you can't lose a life. If you end the Intermission successfully, you will get a new life.

## 1.211 Miscellaneous - Gravitation

Gravitation

-----

BoulderDäsh allows the adjustment of the gravitation in all directions. The stones can also fall up, left, right and as in the Classic BoulderDash down.

## 1.212 The Game Information

Game Information

-----

The game information contains some adjustments, that will be used for the whole game.

Author  
Comment  
Date  
Version  
Ok  
Cancel

## 1.213 The Game Information - Author

Author

-----

Here you can enter your name.

## 1.214 The Game Information - Comment

Comment

-----

This field you can use for any text, that hasn't got any special purpose.

---

## 1.215 The Game Information - Date

Date  
-----

This date is the time, when the game was saved. It will be changed automatically, if you save the game again.

## 1.216 The Game Information - Version

Game Version  
-----

This entry will be changed as well, if you save the game again. It should make the recognition of different versions from one game easier.

## 1.217 The Game Information - Ok

Ok  
-----

By pushing this button the window will be closed and the data will overtaken.

## 1.218 The Game Information - Cancel

Cancel  
-----

With cancel all adjustments, that you have done in this window, will be rejected. The window will be closed.

## 1.219 The Menus of BoulderDäsh

The Menus of BoulderDäsh  
-----

The Main Window Menu

The Game Editor Menu

## 1.220 The Main Window Menu

---

## The Main Window Menu

---

Project	Action
Load game	Classic C64 Demo
About	Random Demo
Quit game	

### 1.221 The Main Window Menu: Project

#### Load game

---

After the choice in the file requester a game with its levels will be loaded. All levels, that were in the memory, will be deleted.

### 1.222 The Main Window Menu: Project

#### About

---

This menu point opens an information requester. It shows the version and the author name and address. This window is identically with the nerv requester which appears if an unregistered user is starting BoulderDäsh.

### 1.223 The Main Window Menu: Project

#### Quit game

---

This point ends BoulderDäsh and closes all open windows, which belong to BoulderDäsh.

### 1.224 The Main Window Menu: Action

#### Classic C64 Demo

---

This menu activates an automatic demonstration of BoulderDäsh.

This demonstration is equal to the C64 self running demo in the first BoulderDash game.

---

It is running on all levels, but it makes only sense to use it on the first level of the "BDash\_I\_Level1.game" game.

You are able to quit the demo by pressing F1 or F10. Pressing ESC causes a "game over" and takes a few seconds.

## 1.225 The Main Window Menu: Action

Random Demo

-----

This feature is available for registered users only.

This menu activates an automatic demonstration of an random BoulderDäsh level.

This requires at least one level containing a solution. Some games are shipped with solve files, but you are able to create your own solutions by using the game editor.

You are able to quit the demo by pressing F1 or F10. Pressing ESC causes a "game over" and takes a few seconds.

## 1.226 The Game Editor Menu

The Game Editor Menu

-----

Project	Edit	Replace	Solve
Load game	Edit level	Graphic sets	Record
Link game	Level settings	Character sets	Play
Save game	-----	Sample sets	Save
-----	Load level	Music	
Game information	Save level		
-----	-----		
Delete game	New level		
	Delete level		

## 1.227 BarLabel

Barlabel

-----

This is not really an menu item. It is only a separator bar between different menu items.



## 1.228 The Game Editor Menu: Project

Load game

-----

After the choice in the File requester a game with its levels will be loaded. All levels, that were in the memory, will be deleted.

## 1.229 The Game Editor Menu: Project

Link game

-----

Like load game all levels of the new game will be added to the levels of the game, which is already in the memory.

## 1.230 The Game Editor Menu: Project

Save game

-----

Saves all levels in one data. So the levels needn't be saved particular.

If you press the Control-key simultaneously, you save the level with protection identification. This protection can't be removed. So please save the game only protected, if you want to give it to another person, or if you are sure, that no more changes are needed.

## 1.231 The Game Editor Menu: Project

Game information

-----

Opens the GameInformation-requester.

## 1.232 The Game Editor Menu: Project

Delete game

-----

With this option you can delete all levels, that are in the memory. Before this happens a security requester appears.

---

### 1.233 The Game Editor Menu: Edit

Edit level

-----

Starts the Level~Editor.

### 1.234 The Game Editor Menu: Edit

Level settings

-----

Opens the Level settings-requester.

### 1.235 The Game Editor Menu: Edit

Load level

-----

Opens an ASL-requester, in which you can choose the level, that you want to load. The level will be added in the level list at the end after loading.

It is also possible to load C64 (498 Bytes) and Atari (504 Bytes) "BoulderDash Construction Kit Caves".

The foreign cave formats are only available for registered users!

### 1.236 The Game Editor Menu: Edit

Save level

-----

Saves the currently chosen level. The LevelName is given as FileName in the ASL-requester.

### 1.237 The Game Editor Menu: Edit

New

-----

Here a level with the size 40\*22 blocks is created and is added to the list. The size is equivalent to the original C64-Caves.

---

### 1.238 The Game Editor Menu: Edit

Delete

-----

Deletes the current level.

### 1.239 The Game Editor Menu: Replace

Graphic Sets

-----

After an savety requester an ASL-requester opens. You choose a graphic set. This graphic set will be copied within all levels of the current game.

This function is identical to the graphic set selection of the level settings: Visual and Noisy. The only difference is, that this menu item effects all levels of the game.

### 1.240 The Game Editor Menu: Replace

Character Sets

-----

After an savety requester an ASL-requester opens. You choose a character set. This character set will be copied within all levels of the current game.

This function is identical to the character set selection of the level settings: Visual and Noisy. The only difference is, that this menu item effects all levels of the game.

### 1.241 The Game Editor Menu: Replace

Sample Sets

-----

After an savety requester an ASL-requester opens. You choose a sample set. This sample set will be copied within all levels of the current game.

This function is identical to the sample set selection of the level settings: Visual and Noisy. The only difference is, that this menu item effects all levels of the game.

---

## 1.242 The Game Editor Menu: Replace

Music

-----

After an save request an ASL-requester opens. You choose a music. This music will be copied within all levels of the current game.

This function is identical to the music selection of the level settings: Visual and Noisy. The only difference is, that this menu item effects all levels of the game.

## 1.243 The Game Editor Menu: Replace

Record

-----

This feature is available for registered users only.

Some timing problems may cause the play back not to be successful.

Here you are able to record a solve for the current level.

After selecting this menu item BoulderDäsh is starting. It is up to You to play the level. If you finish or just loose a life, the record operation is done.

Note: You should define your name by using the game settings, before recording. Your name will be recorded, too.

By using the item Play you are able to play this recording a long a you wish.

Saving the game or using the menu item Solve/Save causes a save of all records, if created or loaded. When You are loading a game the solvings will be load in, too.

## 1.244 The Game Editor Menu: Replace

Play

-----

This feature is available for registered users only.

Some timing problems may cause the play back not to be successful.

The Menu item allows to play a recorded solution of the current level.

---

## 1.245 The Game Editor Menu: Replace

Save

-----

This feature is available for registered users only.

This item allows to save all solve of the current game. If you save a game the solves are saved, too. It is impossible to save the included games, so this item allows to save the solutions alone.

## 1.246 Block Position Table

Block Position Table

-----

The blocks are given from left to right and after the end of the line it will turn to the beginning of the next line.

0	Space - Background (Should be blank)	
1	Ground	
2	Metal	
3	Metal moving (while Leveltilulit)	
4	Metal Fake	
5	Stone	
6	Stone Ghost sleeping	
7	Wall	
8	Growing Wall left/right	
9	Growing Wall up/down	
10	Explosion 0 (The single blocks for the diamond creation explosion)	
11	Explosion 1	
12	Explosion 2	
13	Explosion 3	
14	Explosion 4	
15	Plop 0 (The single blocks for the creation of Rockford and	
16	Plop 1 the stone creation explosion.)	
17	Plop 2	
18	Twin	
19	Reserved	
20- 27	Diamond Ghost Animation	(8 Blocks)
28- 35	Diamond Animation	(8 Blocks)
36- 43	Ghost Animation	(8 Blocks)
44- 51	Water Animation	(8 Blocks)
52- 59	Slime Animation	(8 Blocks)
60- 67	Rockford left Animation	(8 Blocks)
68- 75	Rockford right Animation	(8 Blocks)
76- 83	Stone Ghost Runs Animation	(8 Blocks)
84- 91	Level In Animation	(8 Blocks)
92- 99	Level Out Animation	(8 Blocks)
100-107	Level Out Fake Animation	(8 Blocks)
108-115	Magic Wall Animation	(8 Blocks)
116-123	User Block Animation	(8 Blocks)
124-126	Rockford stands (in each case 3 half blocks for head and legs)	
127	Rockford stands (Main State)	

128	Gravitation Arrow Up	
129	Gravitation Arrow Down	
130	Gravitation Arrow Left	
131	Gravitation Arrow Right	
132-139	Bonus Life Animation	(8 Blocks)
140-147	Space Animation	(8 Blocks)
148	Egg	
149	Egg broken 0	
150	Egg broken 1	
151	Egg broken 2	

## 1.247 Tooltypes of the Graphic Set Files

The Tooltypes of the Graphic Set Files

---

At the moment the following tooltypes will be supported. In brackets there are the default values, that are used, if no tooltypes are found.

### Speed Tooltypes

"Speed_ManRight"	(1)
"Speed_ManLeft"	(1)
"Speed_BonusLive"	(1)
"Speed_MagicWall"	(2)
"Speed_Diamond"	(2)
"Speed_In"	(10)
"Speed_Out"	(10)
"Speed_FakeOut"	(10)
"Speed_DiamondGhost"	(2)
"Speed_Ghost"	(3)
"Speed_Stonie"	(7)
"Speed_Water"	(7)
"Speed_Slime"	(7)
"Speed_MovingBlock"	(1)
"Speed_UserBlock"	(3)
"Speed_Space"	(1)

These tooltypes need a value from 0 to 255. These values are the delay time. The higher this value is the slower will be the animation.

Examples :

```
Speed_Slime=4
Speed_MovingBlock=2
```

### ColorSet Tooltype

"ColorSet"	(none)
------------	--------

This tooltype defines the source of the BDMP-Chunk. This chunk contains the level colors. Under normal conditions the colors are saved within the graphic set. By using this tooltype you are able to define an other file as source.

---

Why is this needed? Well, let's have a look on the "ClassicC64Pumpkin.gfx" graphic set. This file isn't containing any color set. If you take a look at the tooltypes you will find this: "ColorSet=ClassicC64.gfx".

This makes color set editing much easier, because you edit one color set and all graphic sets are using the colors automatically.

An other useful thing is that the ColorSet-tooltype is looking for the BDMP-Chunk only. This is very handy when you make graphic set changes and save the picture by using a paint programm. Under normal conditions the colors will be lost during the save procedure, but if you use the ColorsetHandler you are able to create a stand alone color set. The only thing you must do ist to specify this color set file by using the "colorSet"-icon. Note: It is required that the colorset file is saved within one of the "GraphicSets" subdirectories.

Please read the chapter ColorSetHandler to understand the color set handling. This may save time and avoids frustration.

## 1.248 Tooltypes of the Music Files

The Tooltypes of the Music Files

---

At the moment the following tooltypes will be supported. In brackets there are the default values, that are used, if no tooltypes are found.

"MixedMode" (0)  
"IgnoreJump" (If not specified this mode is disabled)

The Voices are specified as follows:

Voice 1 = 1  
Voice 2 = 2  
Voice 3 = 4  
Voice 4 = 8

If your music is not using Voice 1 and 3 you should specify "MixedMode=5" to allow BoulderDäsh to use this voices for sound effects.

"IgnoreJump" is used for musics that contain an intro. At the end of such music there is a jump command (bxx) that specifies an position right after the intro. If one music is played endless (Continue/Random mode), then use this tooltype to disable this jump.

Example:

IgnoreJump=3

BoulderDäsh ignores a B03-jump command.

---

## 1.249 The Tooltypes of the Title Screen

The Tooltypes of the Title Screen

---

At the moment the following tooltypes will be supported. In brackets there are the default values, that are used, if no tooltypes are found.

Eye_X	(10)
Eye_Y	(10)
Eye_Width	(64)
Eye_Height	(17)
Foot_X	(10)
Foot_Y	(10)
Foot_Width	(64)
Foot_Height	(17)
Music	(TitleClassic.mus)
RTGTitlePrefs	(RTGTitlexxx.Prefs)

The X and Y values are the destination position for the elements. (pixel) Note: The ECS mode allows only X coordinates and width that are factors of 8. (e.G 12 => 8) Within the RTG mode all coordinatinates are available.

The height is limited. Valid are values 1 to 17.

The music tooltip specifies the music for this picture. This entry must not have a path.

"RTGTitlePrefs" is specifying the RTG preferences name for title picture screen mode. This entry must not have a path, too.

## 1.250 Technical information about BoulderDäsh

Technical information about BoulderDäsh

---

BoulderDäsh is 100% assembler coded.

The sourcecode takes 1386745 bytes in 115 files. BoulderDäsh is assembled with DevPac 3.04. DevPac needs 40 seconds and 1.76 MB each time.

The game source files are taking 3734144 bytes in 5952 files and 34 directories. My personal game converter needs 9 Minutes to convert all games.

The first versions of BoulderDäsh were created on an A500-000/7Mhz (2.8 MEG) then (Version 2) on an A2000-000/7Mhz (5 Meg). Since Version 3.0 I'am working with an A2000-030/25Mhz (9 MEG)

The paint program PPaint (4.0/6.4) was used to create graphic sets and title graphics. I wrote this guide using GoldEd (3.x/4.x) and his fantastic fold features together with "GuideFormat" to format lines

---



containing links.