BAL

The Game for Smart People

by Fred Bolder

Index

Foreword

The first Bal game was programmed by Fred Bolder in Turbo Pascal. Later it was converted by Fred Bolder to C# and many levels and new objects were added. During a webdevelopment course, Fred Bolder made together with Michał Kotkowicz, Donnie Avant and Diana Sahlean the web site Games From Scratch including the game Bal. Bal was totally rewritten for JavaScript. The series 1 levels were copied from the C# bal game, but the series 2 levels and the series Small levels were made during the course. The C# bal game has more level series, but they were not copied. Later Fred Bolder decided to make a separate Bal web site based on the Bal code from Games From Scratch, but most of the code had to change a lot, because of the many new objects. There were also a lot of levels added to the existing series.
This documents gives perhaps more information than you want to know. Decide for yourself if you prefer to discover new objects while playing or if you want to be prepared.

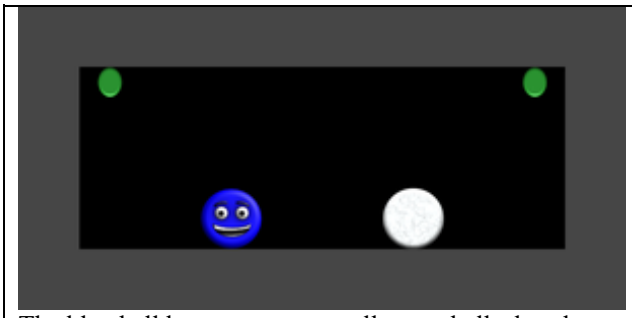
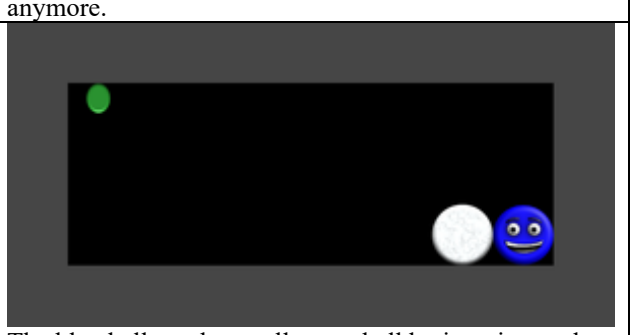
Keep in mind that this manual is for the online Bal game.

Playing the game

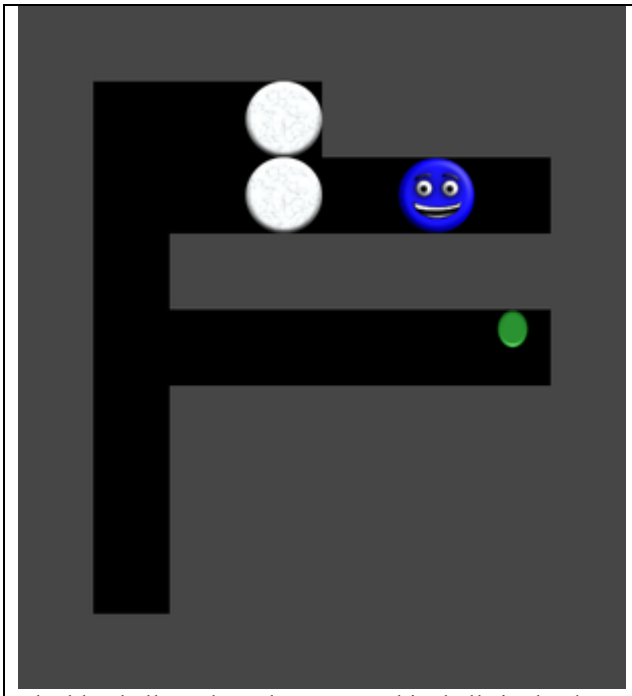
In every level you control the blue ball with the happy face. You have to eat all the small green balls. You can push the white balls and the light blue balls, but not more than 2 at the same time. The light blue balls are floating balls and they will always stay at the same height. Red balls and red fish are very dangerous. If you push a yellow ball, it will continue as far as possible. You cannot push more yellow balls at the same time or push a yellow ball together with another ball. You can push a yellow ball in the directions left, right, up and down. A purple ball is almost the same as a yellow ball, but when you push a purple ball, it will go only one position further. You cannot push a ball through a one direction, a teleport, a game rotator or a door with a lock. You can control the blue ball with the letter keys, the arrow keys, the number keys or the arrow buttons. In the water you can swim in every direction.
If you see for example a level number 750, it doesn't mean that there are 750 or even more levels. The number depends also on the series and on the original Bal game.
When you solve a level, you will get a code that gives you access to the next level whenever you want by pressing the Code button, so it is important to write down the code. Some levels are very difficult. If you can't solve a certain level, you can press the ? button and choose Hint, start with another series or load a random level. You can not get all existing levels by loading a random level.

Tips

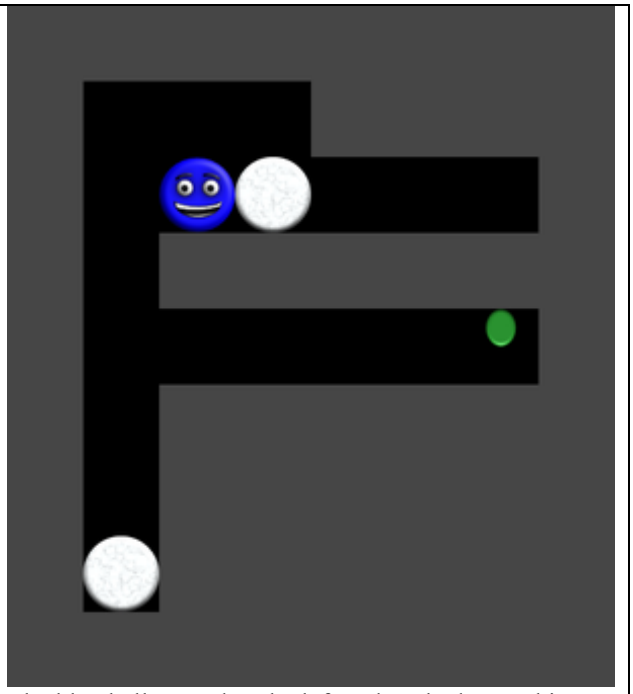
When you use a white ball, keep in mind that you might also need it for something else.

<table>
<tr>
<td> 
The blue ball has to eat two small green balls, but they are both to high to reach, so it has to use the white ball.</td>
<td> 
The blue ball moved the white ball totally to the right and jumped on top of it. Now the blue ball can eat the small green ball, but it is impossible to eat the other small green ball, since the white ball can not be used anymore.</td>
</tr>
<tr>
<td> 
In this example, the blue ball moved the white ball as far as needed to the right and jumped on top of it.</td>
<td> 
The blue ball ate the small green ball by jumping to the right. Now the white ball can be moved to the left to eat the other small green ball.</td>
</tr>
</table>

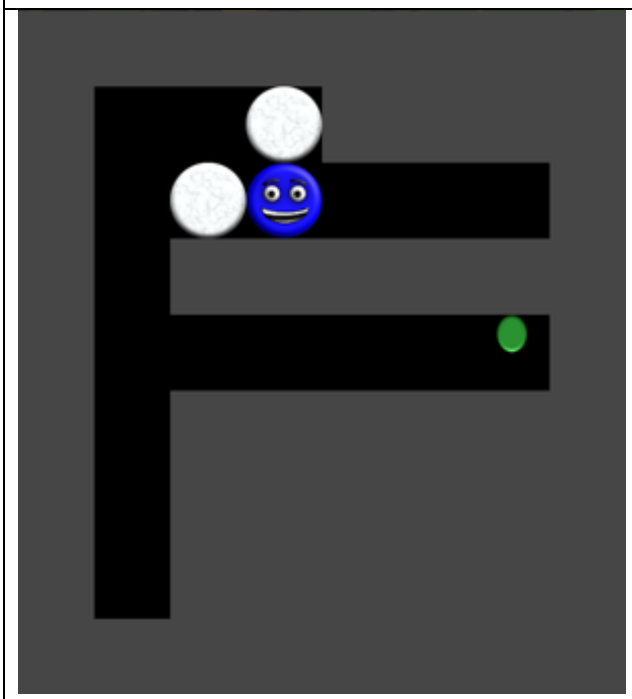
Make sure that you can get all the white balls you need.



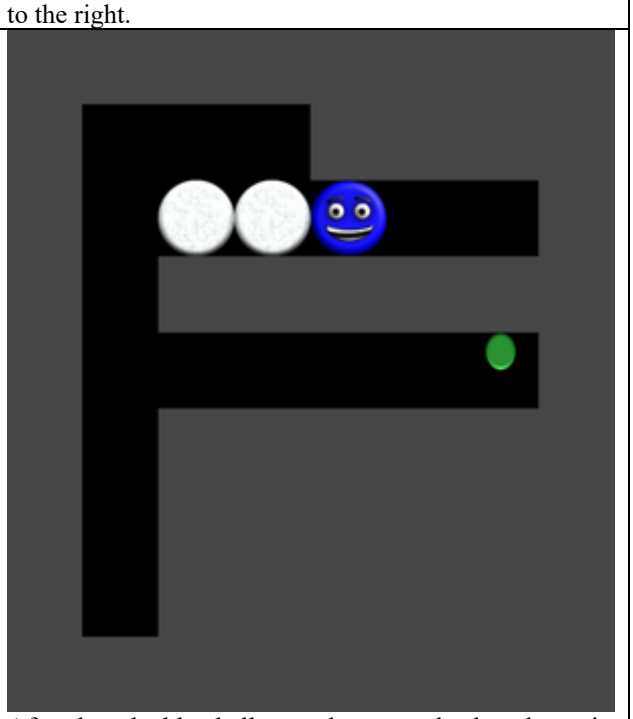
The blue ball needs to throw two white balls in the deep hole, otherwise it can not jump out.



The blue ball moved to the left and pushed one white ball in the hole, but now it can push the white ball only to the right.



In this example, the blue ball moved only two steps to the left.



After that, the blue ball moved one step back and now it can push two white balls in the hole, jump to the right, move to the right and eat the small green ball.

Actions

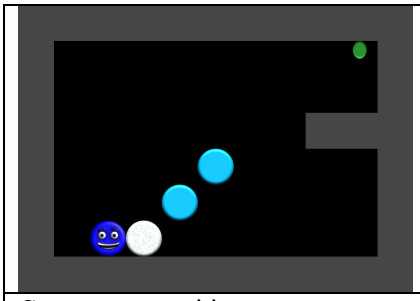
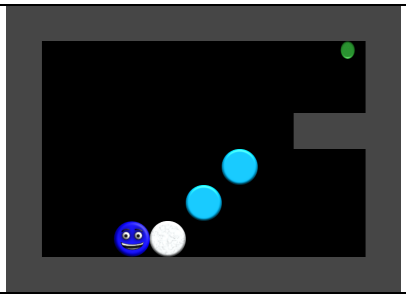
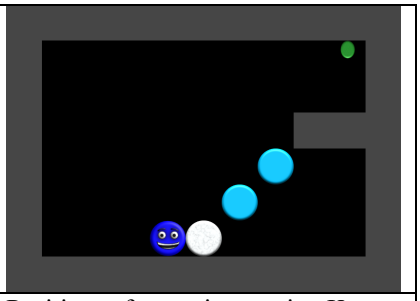
You can control the blue ball with the happy face by pressing keys. There are also arrow buttons available for tablets and phones, but playing the game is much easier with a PC.

Action	Letter key	Arrow key	Number key
Walk left / Swim left	A	Arrow left	4
Walk right / Swim right	D	Arrow right	6
Jump / Push up / Swim up	W	Arrow up	8
Jump left / Swim up left	Q	Shift + Arrow left	7
Jump right / Swim up right	E	Shift + Arrow right	9
Push down / Swim down	S	Arrow down	2
Swim down left	Y	-	1
Swim down right	C	-	3

When you press first the letter K followed by another key or key combination, you can execute the following actions. It doesn't matter if you hold the Shift key while pressing the K.

Key(s) after K	Action
H	Show the objects the blue ball has
L	Move a 2-step stairs to the left
R	Move a 2-step stairs to the right
Shift + L	Move a 3-step stairs to the left
Shift + R	Move a 3-step stairs to the right

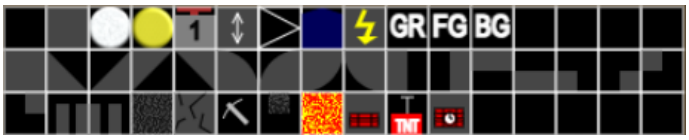
If you are familiar with this game, you know that it is often needed to make stairs and to move them. This requires many keystrokes with the chance of pressing the wrong key. Here's an example of how you can easily move a 3-step staircase to the right using a built-in macro. Please note that if there are objects in the way, the results may be different. In that case, it is not a good idea to use the macro. Let a macro always finish, before pressing again a key.

		
Correct start positions	Positions after pressing K followed by Shift + R	Positions after again pressing K followed by Shift + R

Creating levels

It is possible to create your own levels. It would be great if you send them to me, so I can add them (if they are suitable). Of course you can also create levels just for you and your friends.

The easiest way to create a level is by enabling Create level in the Level menu. Under the level appears a menu. The top row of it is always the same. The contents of the second and third rows depend on the cell in the top row you clicked. Click on an object or a setting and click then on a position on the level.



You can change the dimensions of the level by first selecting a cell and then use the command(s) Insert column, Insert row, Delete column and/or Delete row in the Level menu. To select a cell, hold the Shift key and click on the level.
When you are ready placing all objects (or earlier), you can test the level by disabling Create level in the Level menu. Enable Create level again to make changes. It doesn't matter if you changed the level by testing it. The level will be the same as before the test.
Make sure that you export the level to a file when Create level is enabled, so that nothing is changed.

Here is an overview of the abbreviations that are used in the menu.

Menu	**Abbreviation**	**Description**
Main (top row)	GR	Groups
Main (top row)	FG	Foreground colors
Main (top row)	BG	Background colors
Balls	S0	Red ball intelligence not smart
Balls	S1	Red ball intelligence a little smart
Balls	S2	Red ball intelligence smart
Pistons	T	Piston mode toggle
Pistons	M	Piston mode momentary
Pistons	RF	Piston mode repeatfast
Pistons	RS	Piston mode repeatslow
Pistons	S	Sticky
Pistons	I	Inverted
Elevators	L	Direction left
Elevators	R	Direction right
Elevators	U	Direction up
Elevators	D	Direction down
Elevators	N	Direction none
Foreground colors	X	Delete foreground color
Background colors	X	Delete background color

Not everything is possible in the build-in editor. If you need more you can edit the text file (see Editing or creating a level file).

Editing or creating a level file

A level is saved in a text file. To be able to test a level in Bal with Import level, the file needs to have the extension .txt. Here is an example of an almost empty level that is handy for creating a new level. In the chapter “Overview of objects” you can see what the codes mean (1 = stone, 2 = blue ball, 3 = small green ball, 4 = white ball). You can copy this super easy level and solve it. Change the data and learn how to create your own levels. Obviously, it is not possible to place diamonds in your level. Since the code of Bal is public, you can discover things, but please be honest and don't reveal it to other players.

```
11111111111111111111111111111111
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
1                               1
13                              1
1                               1
1              2     4          1
11111111111111111111111111111111
```

Every line (row) must have the same number of characters (columns). It is important that you use a monospaced font in your text editor. A monospaced font is a font where every character takes up the same amount of horizontal space. In Windows you can for example use Notepad as a text editor. Often it is handy to enable the overtype (or overwrite) mode. With the Insert (or Ins) key, you can mostly switch that mode on and off.

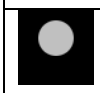
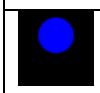
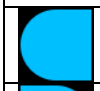
Level settings

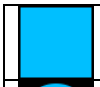
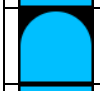
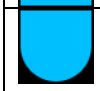
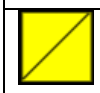
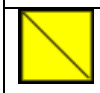
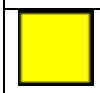
The text file can also contain lines with settings. They have to start with the character $. It is best to put them before the game raster.
Lines that start with // are comments. You can also comment out a setting by preceding it with //.

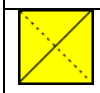
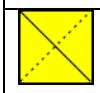
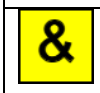
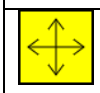
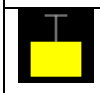
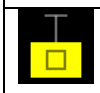
Setting	Description	Example(s)
$addnotes: x, y, note1, note2, note 3 etc.	Adds notes to a music box after the existing notes (- = hold)	$addnotes: 10, 5, D5, -, F5, A5
$background: x, y, width, height, object (code 2)	Puts a new object on the background	$background: 5, 3, 1, 1, 25
$bgcolor: x, y, width, height, color	Sets the background color of the specified area	$bgcolor: 0, 0, 32, 10, lightblue
$direction: x, y, direction	Sets the direction (left, right or none) of a conveyor belt	$direction: 10, 5, left
$fgcolor: x, y, width, height, color	Sets the foreground color of the specified area	$fgcolor: 0, 0, 16, 20, #FFFF00
$gameticks: object name, ticks	Sets the number of game ticks for an object (conveyorbelt, elevator or fish)	$gameticks: fish, 20 $gameticks: conveyorbelt, 10
$gameticksxy: x, y, ticks	Sets the number of game ticks for an object (delay) at the specified position	$gameticksxy: 6, 5, 3
$group: x, y, group	Sets the group number (1-32) to which an object belongs	$group, 6, 10, 2
$hint: text	Sets the text that is shown when the player asks for a hint	$hint: Don't give up!
$instrument: x, y, name, volume	Sets the instrument (accordion, altsax, bass, bassdrum, bell, clarinet, cowbell, guitar, harp, harpsichord, hihat, kalimba, piano, snaredrum, strings, trombone, trumpet, vibraphone or xylophone) and volume percentage of a music box	$instrument: 10, 5, kalimba, 90
$inverted: x, y, yes or no	Sets the inverted mode of a piston	$inverted: 5, 4, yes
$musicbox: x, y, mode, delay	Sets the mode (note or song) and the note delay (game ticks) of a music box	$musicbox: 10, 5, song, 5
$notes: x, y, note 1, note 2, note 3 etc.	Sets the notes of a music box (- = hold)	$notes: 10, 5, C4, -, E4, G4
$pistonmode: x, y, mode	Sets the mode of a piston (momentary, repeatfast, repeatslow or toggle which is the default)	$pistonmode: 7, 1, repeatfast
$sound: object (code 2), when	Sets when a sound is played (when = default, never or player)	$sound: 22, player
$startlevelmessage: text	Message that is shown at the start of a level	$startlevelmessage: Good luck!
$sticky: x, y, yes or no	Makes a piston sticky or not sticky	$sticky: 20, 5, yes

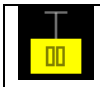
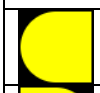
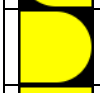
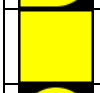
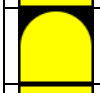
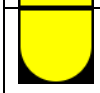
Overview of objects

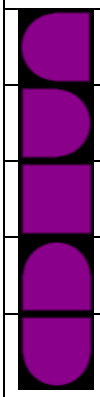
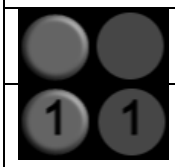
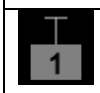
Code 1 is used in the data files and is converted to Code 2 for further use. Code 1 has always a length of one character.
Normally the background color is black, unless otherwise defined in a level data file.
Also the foreground color can be defined in a level data file, but it does not affect all objects.
Stones can be used to represent ice, sand, leaves etc.
In a level you can click on the following objects to see the details of it: Delay, Music box, Piston and Pistions trigger

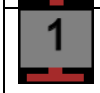
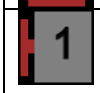
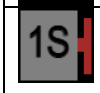
Image	Name	Code 1	Code 2	Description
	Blue bal	2	2	The blue ball is the player.
	Blue ball with sad face	2	2	When the blue ball is dying, it has a sad face.
	Blue ball wearing diving glasses	2	2	The blue ball can only swim when it is wearing diving glasses.
	Blue ball with propeller	2	2	When the blue ball has a propeller, it can fly.
	Small green ball	3	3	A small green ball is food for the blue ball. The goal of the game is to eat all the small green balls.
	Small silver ball	°	140	When the blue ball takes a small silver ball, it has telekinetic power. By pressing the Space bar or the A button it can move the following objects that are close to it (one at the time): white ball, light blue ball, yellow ball, purple ball, moveable gray ball, orange ball, direction changer, time bomb, conveyor belt part The object that will be moved when using telekinetic power is highlighted.
	Small blue ball	%	168	When the blue ball eats a small blue ball, it duplicates itself. By pressing the B key or the S button you set which blue ball you control. The blue ball that you control is highlighted. If one of the blue balls takes for example a key or diving glasses, also the other blue ball has it. When there is a travel gate, there can not be a small blue ball.
	White ball	4	4	White balls can be pushed to the left and to the right, but not more than two at the same time.
	Light blue ball	5	5	Light blue balls float and do not fall. They can be pushed to the left and to the right, but not more than two at the same time.
	Light blue bar left	é	126	Light blue bars float and do not fall. A horizontal light blue bar consists of a left part, a right part and possibly one or more middle parts. It can be pushed to the left or to
	Light blue bar right	è	127	

	Light blue bar middle	e	128	the right by the blue ball when there is no weight on top, but not at the same time with other objects. A vertical light blue bar consists of a top part, a bottom part and possibly one or more middle parts. It can be pushed up (when there is no weight on top) or down by the blue ball, but not at the same time with other objects. Light blue bar parts are also useful as decoration to make a level look nicer. In that case, it doesn't have to be a valid light blue bar. Code 1 for the middle part is an e without two dots, since the e with two dots can be difficult to type on a keyboard.
	Light blue bar top	É	129	
	Light blue bar bottom	È	130	
	Yellow ball	9	9	Yellow balls float and do not fall. They can be pushed to the left, to the right, up and down, but only one at the time. When a yellow ball is pushed, it continues until it can not go further. The direction can be changed with a direction changer.
	Direction changer 1	C	84	Direction changer 1 changes the direction of yellow balls as follows: Right to Up Left to Down Up to Right Down to Left The blue ball can move a direction changer to the left, to the right, up and down, but only one at the time.
	Direction changer 2	c	85	Direction changer 2 changes the direction of yellow balls as follows: Right to Down Left to Up Up to Left Down to Right The blue ball can move a direction changer to the left, to the right, up and down, but only one at the time.
	Direction changer 3	+	86	Direction changer 3 changes the direction of yellow balls as follows: Right to Left Left to Right Up to Down Down to Up A direction changer 3 can also change the direction of horizontal yellow bars from right to left or from left to right and it can change the direction of vertical yellow bars from up

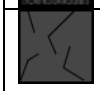
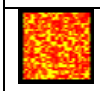
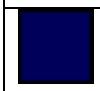
				to down or from down to up. The blue ball can move a direction changer to the left, to the right, up and down, but only one at the time.
	Direction changer 4	Â	138	Direction changer 4 works as a direction changer 1, but after it is used it changes into a direction changer 5 that works as a direction changer 2. The blue ball can move a direction changer to the left, to the right, up and down, but only one at the time.
	Direction changer 5	â	139	Direction changer 5 works as a direction changer 2, but after it is used it changes into a direction changer 4 that works as a direction changer 1. The blue ball can move a direction changer to the left, to the right, up and down, but only one at the time.
	Yellow ball synchroniser	&	155	When there are more yellow ball synchronisers connected, yellow balls pause until there is a yellow ball at every synchroniser of the connected synchronisers, the balls were all going in the same direction and there is place for all balls to continue after the synchroniser. You can see it like the yellow balls are waiting for each other and when they are complete they will continue. The blue ball can move a yellow ball synchroniser to the left, to the right, up and down, but only one at the time.
	Yellow pusher	Ψ	115	A yellow pusher can push one or more yellow balls or bars, but only one per direction. All yellow pushers are activated at the same time by the yellow pushers trigger which can be used multiple times. The blue ball can move a yellow pusher to the left, to the right, up and down, but only one at the time.
	Yellow pushers trigger	ψ	116	A yellow pushers trigger triggers all yellow pushers at the same time when something (such as the player's weight) is placed on it. If the blue ball (player) has a propeller, it stands on a ladder or it hangs in a rope, pushing down is needed to activate. The color of the handle can be changed with the $fgcolor setting.
	Yellow stopper	Σ	131	A yellow stopper stops all moving yellow balls and yellow bars when something (such as the player's weight) is placed on it. If the blue ball (player) has a propeller, it stands on a ladder or it hangs in a rope, pushing down is needed to stop. The color of the handle can be changed with the $fgcolor setting.

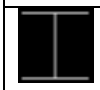
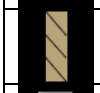
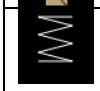
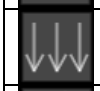
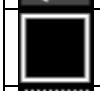
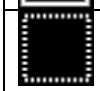
	Yellow pauser	ρ	136	A yellow pauser pauses or unpauses all yellow balls and yellow bars when something (such as the player's weight) is placed on it. If the blue ball (player) has a propeller, it stands on a ladder or it hangs in a rope, pushing down is needed to pause or unpause. The color of the handle can be changed with the $fgcolor setting.
	Yellow slowdowner	~	156	When the blue ball takes a yellow slowdowner, all yellow balls and yellow bars will move slower for some time.
	Yellow bar left	ó	121	A horizontal yellow bar consists of a left part, a right part and possibly one or more middle parts. A vertical yellow bar consists of a top part, a bottom part and possibly one or more middle parts. Yellow bars float and do not fall. They can be pushed by the blue ball or a yellow pusher, but not at the same time with other objects. It is not possible to push a yellow bar left, right or up when there is weight on top, but pushing down is possible. When a yellow bar is pushed, it continues until it can not go further. Yellow bar parts are also useful as decoration to make a level look nicer. In that case, it doesn't have to be a valid yellow bar.
	Yellow bar right	ò	122	
	Yellow bar middle	ö	123	
	Yellow bar top	Ó	124	
	Yellow bar bottom	Ò	125	
	Red ball	8, s, S	8, 93, 94	Red balls are very dangerous. A red ball will shoot the blue ball with a laser if it is in the same vertical position and nothing blocks the view. If the blue ball is hit, it dies. With the help of mirrors, red balls can also see and shoot the blue ball in other positions. How smart a red ball is, depends on the code. Code 8 (8) is not smart. It will not move. Code s (93) is a little smart. It can move, jump and use elevators, but it will not try to find the blue ball. It will not move objects. Code S (94) is smart. It will try to find the blue ball. It will not move objects. Red balls can multiply themselves by using a copier. They can <u>not</u> be electrocuted. A red ball can swim without wearing diving glasses.
	Mirror 1	α	95	Red balls can see more by using mirrors. When the red ball is at the left of mirror 1, it can also view up. When the red ball is at the right of mirror 1, it can also view down. Mirrors can also be combined.
	Mirror 2	β	96	Red balls can see more by using mirrors. When the red ball is at the left of mirror 2, it can also view down. When the red ball is at the right of mirror 2, it can also view up. Mirrors can also be combined.
	Light bulb	λ	105	If a red ball that is a little smart eats a light bulb, it becomes a smart red ball.

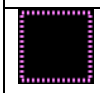
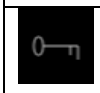
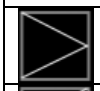
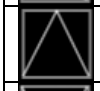
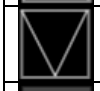
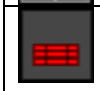
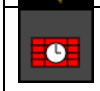
	Purple ball	p	28	Purple balls float and do not fall. They can be pushed to the left, to the right, up and down, but only one at the time.
	Purple bar left Purple bar right Purple bar middle Purple bar top Purple bar bottom	á à ä Á À	100 101 102 103 104	A horizontal purple bar consists of a left part, a right part and possibly one or more middle parts. A vertical purple bar consists of a top part, a bottom part and possibly one or more middle parts. Purple bars float and do not fall. They can be pushed by the blue ball, but not at the same time with other objects. It is not possible to push a purple bar left, right or up when there is weight on top, but pushing down is possible. Purple bar parts are also useful as decoration to make a level look nicer. In that case, it doesn't have to be a valid purple bar.
	Gray ball	.	83	Gray balls float and do not fall. Normal gray balls can not be pushed.
	Gray ball one move	o	82	Gray balls one move float and do not fall. They can be pushed to the left, to the right, up or down, but only onces. After pushing a gray ball one move, it will turn into a normal gray ball.
	Gray ball two moves	δ	98	Gray balls two moves float and do not fall. They can be pushed to the left, to the right, up and down, but only twice. After pushing a gray ball two moves, it will turn into a gray ball one move.
	Orange ball	O	40	Orange balls can be pushed to the left and to the right, but only one at the time. When an orange ball is pushed, it continues until it can not go further. When it falls on a Triangle stone bottom left, it continues to the right. When it falls on a Triangle stone bottom right, it continues to the left.
	Pistons trigger	158	m	A pistons trigger tries to activate or deactivate all toggle mode or momentary mode pistons that belong to the same group as the pistons trigger. If the blue ball (player) has a propeller, it stands on a ladder or it hangs in a rope, pushing down is needed to control the pistons trigger. The default group of a pistons trigger is 1, but you can change that with the $group setting. The number on a pistons trigger indicates the group. A pistons trigger can also start or stop a music box that is in song mode. The color of the handle can be changed with the $fgcolor setting.
	Piston up	159	Ù	A piston up moves a moveable object that is on top of it one position up. If needed, it moves also other moveable objects. That an object is not moveable by the blue ball

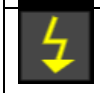
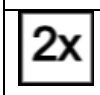
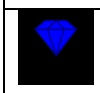
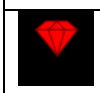
				doesn't mean that a piston can also not move it. A piston can also move a door, a copier and an unlimited number of objects at the same time. A piston up or a piston down can move a light blue ball vertically. A piston can not move bars. If a piston is sticky, it pulls the attached object back when deactivating. By default, a piston is not sticky, but with the $sticky setting you can change that. Unlike a yellow pusher, a piston moves a yellow or orange ball only one position, then the ball stops. With the $pistonmode setting you can change the mode of a piston. You can also invert a piston with the $inverted setting. The default group of a piston is 1, but you can change that with the $group setting. The number on a piston indicates the group. An exclamation mark (!) indicates that a piston tries to activate, but it can not. When it tries to activate, it will activate at the moment it can (for example when an object moves out of the way). Click on a piston to see its settings. See also the Pistons trigger object.
	Piston up extended part	160	Û	This image is used to show that a piston up is activated.
	Piston down	161	Ì	A piston down moves a moveable object that is directly under it one position down. If needed, it moves also other moveable objects. See Piston up for more information.
	Piston down extended part	162	Î	This image is used to show that a piston down is activated.
	Piston left	163	Ö	A piston left moves a moveable object that is directly at the left of it one position to the left. If needed, it moves also other moveable objects. See Piston up for more information.
	Piston left extended part	164	Ô	This image is used to show that a piston left is activated.
	Piston right	165	Ë	A piston right moves a moveable object that is directly at the right of it one position to the right. If needed, it moves also other moveable objects. The S indicates that it is a sticky piston, so in this case the piston was modified with the $sticky setting. See Piston up for more information.
	Piston right extended part	166	Ê	This image is used to show that a piston right is activated.
	Empty space	(Space), 0	0	An empty space has not object inside.
	Stone	1	1	A stone blocks everything. The color of the stone can be changed with the $fgcolor setting.

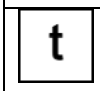
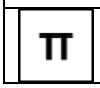
	Triangle stone bottom left	G	15	A triangle stone is often used to make the graphics look nicer. Bottom left means that the 90-degree corner is at the bottom left. This object can be used as a glide for the blue ball and the red, white and orange balls. The color of the stone can be changed with the $fgcolor setting.
	Triangle stone bottom right	H	16	A triangle stone is often used to make the graphics look nicer. Bottom right means that the 90-degree corner is at the bottom right. This object can be used as a glide for the blue ball and the red, white and orange balls. The color of the stone can be changed with the $fgcolor setting.
	Triangle stone top left	I	17	A triangle stone is often used to make the graphics look nicer. Top left means that the 90-degree corner is at the top left. The color of the stone can be changed with the $fgcolor setting.
	Triangle stone top right	J	18	A triangle stone is often used to make the graphics look nicer. Top right means that the 90-degree corner is at the top right. The color of the stone can be changed with the $fgcolor setting.
	Quarter circle stone bottom left	i	141	A quarter circle stone is used to make the graphics look nicer. Bottom left means that the 90-degree corner is at the bottom left. The color of the stone can be changed with the $fgcolor setting.
	Quarter circle stone bottom right	í	142	
	Quarter circle stone top left	ì	143	
	Quarter circle stone top right	î	144	
	Half stone left	ü	145	A half stone is used to make the graphics look nicer. The color of the stone can be changed with the $fgcolor setting.
	Half stone right	ú	146	
	Half stone top	ù	147	
	Half stone bottom	û	148	
	Quarter stone bottom left	á	149	A quarter stone is used to make the graphics look nicer. The color of the stone can be changed with the $fgcolor setting.
	Quarter stone bottom right	é	150	
	Quarter stone top left	í	151	
	Quarter stone top right	ó	152	
	Stone pattern 1	ń	153	A stone pattern is used to make the graphics look nicer.These patterns must not be used in

	Stone pattern 2	ώ	154	levels with a game rotator. The color of the stone can be changed with the $fgcolor setting.
	Weak stone	y	35	Weak stones can be mined with a pickaxe.
	Damaged stone	F	12	When there is for too long a weight on top of a damaged stone, it will break. The color of the stone can be changed with the $fgcolor setting.
	Pickaxe	Y	34	With a pickaxe you can mine weak and damaged stones.
	Small weak stone	π	99	If the blue ball has taken a small weak stone, there is a weak stone created at every previous position of the blue ball. This can be very handy, but the blue ball can also block itself.
	Lava	V	22	When the blue ball or a red ball falls into the lava it dies. Lava can be used to get rid of balls. If lava is used in combination with a music box, you might want to set the sound for lava to player.
	Water	w	23	When the blue ball is wearing diving glasses, it can swim in the water, but red fish are dangerous.
	Water surface	W	20	The water surface contains waves.
	Water surface right	ς	113	This is a triangle stone with water surface on the right side.
	Water surface left	σ	114	This is a triangle stone with water surface on the left side.
	Diving glasses	d	26	The blue ball needs diving glasses for swimming. Without diving glasses it will die.
	Red fish	f	27	Red fish are very dangerous for the blue ball. They are chasing the blue ball when it is in the water. A red fish can be electrocuted.
	Propeller	X	81	If the blue ball takes a propeller, it can fly.
	Palm tree trunk part	P	21	A palm tree can be made with palm tree trunk parts and green triangle stones. This object must not be used in levels with a game rotator.
	Elevator	D, U	6, 106	Elevators can be used to move the blue ball and white, red and orange balls up or down. The code D (6) means that the elevator goes first down after the level is loaded.
	Horizontal elevator	L, R	7, 107	Horizontal elevators can be used to move the blue ball and the white, red and orange balls to the left or to the right. The code L (7) means that the elevator goes first to the left after the level is loaded.
	Elevator entrance and exit	E	39	If the blue ball, a red, white or orange ball is waiting on top of this object, the ball will be

				automatically taken into the elevator. If there is a ball inside the elevator, it will be pushed out when there is place. The foreground color can be changed with the $fgcolor setting.
	Conveyor belt left	{	171	A conveyor belt consists of a left part, a right part and possibly one or more middle parts. An R in the left part indicates that the direction is to the right and an L indicates that the direction is to the left. When the direction is none, the conveyor belt is not active and there is no letter shown. The blue ball can move a conveyor belt part to the left, to the right, up and down, but only one at the time. The color of the conveyor belt can be changed with the $fgcolor setting.
	Conveyor belt middle	Ø	172	
	Conveyor belt right	}	173	
	Ladder	=	25	The blue ball can use a ladder to move up or down. A ladder doesn't block the view. The color of the ladder can be changed with the $fgcolor setting.
	Horizontal ladder	h	90	The blue ball can use a horizontal ladder to move to the left or to the right. A ladder doesn't block the view. The color of the ladder can be changed with the $fgcolor setting.
	Small ladder	Λ	108	If the blue ball has taken a small ladder, a ladder part will be created under the blue ball when the blue ball jumps straight up in an empty space. When a blue ball has taken also a small weak stone, it can not create ladders.
	Horizontal rope	_	80	The blue ball can walk on top or hang under a horizontal rope.
	Vertical rope	ι	137	The blue ball can climb in a vertical rope.
	Coil spring	j	118	If the blue ball has taken a coil spring, it can jump higher. When there is not enough space for a high jump, it will do a normal jump. The color of the coil spring can be changed with the $fgcolor setting.
	Force up	Ω	109	A force object moves the blue ball and the white, red and orange balls as far as possible in the indicated position. The blue ball can push a force object, but not against the force direction. Force down seems perhaps not useful, because of the gravity, but it works also in the water. A moving yellow ball will continue against a force.
	Force down	ω	110	
	Force right	Φ	111	
	Force left	φ	112	
	Teleport	T	31	Only the blue ball can travel with a teleport.
	Self-destructing teleport	τ	92	Only the blue ball can travel with a self-destructing teleport. The teleport self-destructs after use.

	Purple self-destructing teleport	Π	170	Only a purple ball can travel with a purple self-destructing teleport. The teleport self-destructs after use. A purple ball can be pushed from any direction into a purple teleport. For other objects it is like a purple teleport does not exist.
	Travel gate	g	132	The blue ball can travel to a different world by using a travel gate. The color of the travel gate can be changed with the $fgcolor setting. There can be only one travel gate in a level.
	Door	ß	169	The blue ball can not open a door by pushing. A piston can move a door. The combination of a door, a sticky inverted piston down and one or more pistons triggers make a door that can be opened by a blue ball.
	Locked door	l	30	Only a blue ball that has a key can open a locked door. The blue ball can not push balls or other objects throught the door. The color of the stone can be changed with the $fgcolor setting.
	Key	k	29	The blue ball can open locked doors with a key. The color of the key can be changed with the $fgcolor setting.
	One direction port right	>	10	Only the blue ball and smart red balls can go through a one direction port and only in the indicated direction. The foreground color can be changed with the $fgcolor setting.
	One direction port left	<	11	
	One direction port up	^	87	
	One direction port down	v	88	
	Bomb	B	36	When a bomb explodes, it destroys the stone in which it is. Use the detonator to detonate all bombs at the same time. The color of the stone can be changed with the $fgcolor setting.
	Detonator	b	37	The detonator sets off all bombs at the same time when something (such as the player's weight) is placed on it. If the blue ball has a propeller, it stands on a ladder or it hangs in a rope, pushing down is needed to detonate. The color of the handle can be changed with the $fgcolor setting. There can be only one detonator in a level.
	Explosion	*	38	This image is used as an animation for an exploding bomb.
	Time bomb	Ξ	117	A time bomb is activated by moving it. Some time after it is activated, it explodes and it destroys the objects that are around it, including the blue ball, red balls and red fish. A purple teleport will not be destroyed. The timer resets every time the bomb is moved,

				but once the bomb is activated, it can not be deactivated. If the bomb destroys a small green ball (food), the blue ball will die. A time bomb floats and does not fall. It can be moved alone to the left, to the right, up and down. Moving by a piston has no influence on the timer. The color of the stone can be changed with the $fgcolor setting.
	Trap door	-	13	The blue ball can walk over a trap door, but when it stays too long on top, it will open. White balls and red balls can also fall through a trap door.
	Trap door half open		14	This image is used as an animation for an opening trap door.
	Electricity	!	91	When a blue ball walks under this object, there is a chance that it will be electrocuted. The color of the stone can be changed with the $fgcolor setting.
	Magnet	µ	119	When the blue ball comes near a magnet, it loses metal objects, such as a coil spring, a key and a pickaxe. The color of the stone can be changed with the $fgcolor setting.
	Copier	Δ	97	A copier copies a white or red ball that is on top of it, if there is place for the copies that come out from the sides.
	Time freezer	u	120	When the blue ball takes a time freezer, the time stands still for a moment for several objects. Elevators, red balls and fish will stop moving, red balls will not shoot and red fish will not attack. Electricity will not be activated, but if it was on, it will remain activated. The elapsed time for time bombs will be paused. The color of the clock can be changed with the $fgcolor setting.
	Yellow diamant	γ	133	When the blue ball takes a yellow diamant, the first part of the code for the secret series will be shown. Make sure to write the code part down and keep it in a safe place.
	Blue diamant	Γ	134	When the blue ball takes a blue diamant, the second part of the code for the secret series will be shown. Make sure to write the code part down and keep it in a safe place.
	Red diamant	ξ	135	When the blue ball takes a red diamant, the third and last part of the code for the secret series will be shown. Make sure to write the code part down and keep it in a safe place.
	Music box	M	157	When there falls a ball through a music box, it plays a musical note. The default note is C4. With the $notes setting, you can set one or more notes (comma separated). When there are more notes set, the next time a ball falls through the box, the next note will be played. A music box plays always one note at the time. For playing chords, more music

				boxes are needed. The default instrument is xylophone. With the $instrument setting you can set the instrument and the volume. When a music box is in song mode (see $musicbox), it can be started or stopped by a pistons trigger.
	Delay	)	167	When there is an object with weight on a delay, it will fall through the box after the set number of game ticks has elapsed. The default number of game ticks is 3, but you can adjust it with the $gameticks setting. A game tick has normally a duration of 50 milliseconds.
	Game rotator	t	89	When the blue ball walks through a game rotator, the whole game rotates 90 degrees clockwise. A game rotator can only be used for levels in which the number of columns is the same as the number of rows.
	Panagiotis	@	24	The greek letter Π (pi) indicates that the level is made by Παναγιώτης (Panagiotis).