Sokoban 97

Contents:

Rules

Use the Sokoban symbol ![icon] to move all boxes
![icon] across corridors
![icon] to target squares
![icon] . The corridors are surrounded by walls
![icon] .

You can move the Sokoban symbol and the boxes using the cursor keys or the mouse according to the following **rules**:

- · The Sokoban symbol can only be moved across fields that are not occupied by boxes.

- · Boxes can be pushed as long as the square following the box is not occupied by a wall or another box.

- · Boxes can only be pushed but not pulled (Exception: <u>Undo last move</u>).

A level is completed when all boxes are placed on target squares.

There are 90 different built-in levels. The first 50 of them (which are identical with the 50 mazes of the original Japanese Sokoban) have to be solved one after another, in continuous order.

After you have completed all 50 standard levels in the given order, you may load any higher level you like, and, as a bonus, you now are able to undo any number of moves.

High scores will be saved by number of moves as well as by number of pushes.

Menus - Overview

File menu

Item *Setup*

Purpose: Set language and appearance

Submenu *Language*: Set language to German / English

Options *Outer squares: optimized* and *Outer Squares: filled*:

These options have the purpose to optimize the appearance of custom levels.

If the option *Outer squares: optimized* is checked, all squares outside the corridors will be represented uniformly. Depending on whether the option *Outer squares: optimized* is checked, all outer squares will appear as wall symbols or as floor symbols. Especially the appearance of custom levels can be ameliorated by this option, but also the appearance of the built-in levels is affected by the option *Outer squares: filled.*

Option *Enable warnings*:

When loading custom levels from file, you can also use files with more columns and rows than the program can handle. Normally, this option is checked, and you get a message that tells you that the level may be not playable. You can disable this warning here (see also Level menu / Load custom level - XSB files).

Item *Exit*

Purpose: Exit program (you will be asked whether you are sure)

Shortcut: Alt + F4

Level menu

Item *Restart level*

Purpose: Restart level if stuck.

Shortcut: Ctrl + b

Item *Next level*

Purpose: Load next level. As long as level 50 has not been completed, you cannot select a level higher than the one following the highest level solved.

Shortcut: Ctrl + n

Item *Previous level*

Purpose: Load previous level.

Shortcut: Ctrl + v

Item *Go to level...*

Purpose: Select level and show high scores.

High scores correspond to the high score list on http://xsokoban.lcs.mit.edu/xsokoban.html.

As long as level 50 has not been completed, you cannot select a level higher than the one following the highest level solved.

Shortcut: Ctrl + g

Item *Load custom level...*

Purpose: Load an external level developed with the <u>editor</u>.

You can load levels with extensions .XSB and .SBL.

XSB Files: After completing XSB-files, high scores are evaluated and saved. A movie with the solution will be saved in a file with the same name, extended to .XHS. If the file name ends in a one to three digit number, a file with the same name, ending with the following number, will be searched after completion, and the items "next level" and "previous level" will be activated.

XSB files are ASCII files. They can be created using the built-in editor but also using any external ASCII editor. ASCII characters have the following meaning:

Space floor / corridor

. target square

$ box

*	box on target square
@	Sokoban man
+	Sokoban man on target square
#	wall

The program does not read more than 19 columns and 16 rows. Custom levels containing 20 (but not more) columns normally can be played nevertheless because the program tries to calculate the 20th column automatically. The warning message displayed for oversized mazes can be disabled in the setup menu (see also <u>Editor menu</u>, <u>File menu / Setup / Enable warnings</u>).

SBL Files: Are only supported for compatibility with older versions. High scores are not recorded. When playing custom levels, the items "previous level" and "next level" are not available, you can only choose "Go to level...". When the custom level is finished, the standard level which was played before will be loaded.

Shortcut: Ctrl + l

Item *Return to standard levels*

Purpose: Cancel playing custom levels.

Shortcut: Ctrl + z

Item *Play movie*

Purpose: Show solution.

If a level has been completed previously, you can watch the solution being replayed.

After a level is solved, the program will save the solution if a new high score with respect to the number of moves / pushes has been achieved.

The label to the left of the control panel shows which of the two solutions - best number of moves or best number of pushes - is shown. If you click this label, you can change between high score by moves and high score by pushes.

Shortcut: Ctrl + p

Remark:

Yoshio Murase is publishing new Sokoban levels every one or two weeks on his URL http://www-student.ulis.ac.jp/~yoshio/sokoban.html. Despite his homepage is in Japanese, the pictures of the levels are self-explanatory, and many of the links are readable.

You can **download** the same levels, readily formatted as .XSB files, from my homepage http://home.pages.de/~dk5ci. If you are using Windows 95, you can directly invoke my homepage from the introduction screen of Sokoban - see also <u>Help menu</u>, Item *About.*

Edit menu

Item *Switch to edit mode*

Purpose: Activate the level editor.

Cursor keys: The editor allows you to build your own Sokoban levels. The current position is marked by a frame, which can be moved using the cursor keys. The following keys will change the symbol at the current position:

Space	floor / corridor
.	target square
$	box
*	box on target square
@	Sokoban man
+	Sokoban man on target square
#	wall

As only and exactly one single Sokoban man must exist, it is not possible to replace the Sokoban symbol. Therefore, you first have to place the Sokoban to where you want to have it before you can put your new symbol to where the Sokoban has been before.

At the beginning, the editor will show the maze currently in use. The optimization is switched off as long as the editor is active.

The leftmost column cannot be edited. It always contains wall symbols.

Mazes which use the 19th column are recognized by the program automatically. In this case, after leaving the editor, the first and the last column will be painted half as wide as the other columns. The program will add the necessary wall symbols in column 20 by itself to improve appearance.

Using the mouse: You can select the symbol by left-clicking the symbol bar in the first column, or from the popup menu which is opened by a right mouse click. Insert the symbol by left-clicking to where you want to place it.

Shortcut: Ctrl + e

Item *Clear board...*

Purpose: Produces an empty maze, consisting of a Sokoban man and either only floor symbols ("clear the board" = yes) or only wall symbols ("clear the board" = no) as a starting point for designing a new level from scratch.

Shortcut: none

Item *Done...*

Purpose: Close the editor, play the new level.

Before closing the editor, the program controls whether you have established a legal position with as many target squares as there are boxes. You are asked whether you want to save the new level so that it can be loaded later, using "Level | Load custom level...", or whether you want to start playing without saving. If you do not want to save now, you cannot save this level later. Even if you save, you can start playing the new level after saving.

Mazes can be saved in two different formats, as XSB files and as SBL files.

For saving files, only use the XSB format. The SBL format is outdated and will no longer be supported g versions. For a description of the differences, see Level menu, item *Load custom level...*

Shortcut: Ctrl + f

Item *Cancel, continue game*

Purpose: Quit edit mode without, restore previously active level and position.

Shortcut: Ctrl + x

Position menu

Item *Undo last move*

Purpose: As it says: undo last move.

As long as level 50 has not been completed, the following principles apply: In this stage, undoing a move is not provided for correcting strategic errors which happen in your brain, but only for correcting mechanical errors, e. g. pressing a key a bit too long. Therefore, you can only take back one move, and, as a penalty, by undoing a move the move counter is incremented.

After completing level 50, you can undo as many moves as you like, without getting penalty points, and with the move counter being decremented for each move you take back. Thus, it is a bit easier to ameliorate high scores and to find optimum solutions. (This will not work after more than 1996 moves have been made because of the limited size of the history array, but generally, you will not need more than 1996 moves.)

Shortcut: Del or backspace

Item *Save position...*

Purpose: The actual position is saved along with the move counter and other data to let you continue partly solved levels later and play other levels meanwhile.

Shortcut: Ctrl + s

Item *Restore position from file...*

Purpose: Continue partly solved levels.

Remark: When a continued game is played, *Restart level from beginning* (Ctrl + b) and high score list updating only works with the 90 built-in levels, not with custom levels.

Shortcut: Ctrl + w

Help menu

Item *Help*

> **Shortcut:** F1

Item *Info...*

> Displays the windows info screen with exact version number and build date of Sokoban.

Item *About*

> Shows the introduction screen (In Windows 95, you can invoke my homepage by clicking on my URL in that screen).

About this game

The Japanese word "Sokoban" (see introduction screen of Sokoban if you want to know how it is written in kanji) means "warehouse keeper".

There are numerous variants of this program for different operating systems. Originally, it was developed by Japanese programmers who won an award with it in the early eighties. Levels 1 to 50 are the original Sokoban mazes, taken from the first Sokoban program for the PC which I encountered in 1992, a freeware program by Alan B. Liss. You can still get it via internet at http://www2.hunterlink.net.au/~ddrge/games/games.html.

My version is programmed using Borland Delphi 1.0. Levels 51 to 90 are from the Unix program XSokoban, which also uses the 50 original levels and adds 40 more freeware levels. If you have Unix and a C compiler, you can download the source code for XSokoban at http://xsokoban.lcs.mit.edu/xsokoban.html and compile XSokoban. You can play XSokoban via the Internet; high scores are saved and published at this address.

Allan B. Liss writes: "If you complete all 50 levels, there won't be any fireworks, just that warm fuzzy feeling of satisfaction one gets when one overcomes a challenge. You could always give Mensa a call or something."

Well, the puzzles are not quite as difficult that you must be a Mensa member to complete them, and you can be assured, each of the 90 levels can be solved, but some of them are very, very hard.

Have fun, and do not give up.

Gerald Holler

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The complete archive contains the following files:

README.TXT
LESEN.TXT
SOKOBN16.EXE
SOKODLL.DLL
SOKOBN97.HLP
SOKENG97.HLP

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Gerald Holler

e-mail: dk5ci@newsfactory.net
URL: http://home.pages.de/~dk5ci