

LogTek Puzzle Maker

Version 3.0

What are Japanese Puzzles?

Japanese Puzzles (also known as "Pic-a-Pix", "Paint by numbers", "Nonograms", "Griddlers" and other names) are puzzles with a hidden picture. If the picture is solved correctly, the picture will slowly appear.

How to solve Japanese Puzzles?

A Japanese Puzzle contains a field full of cells. Beside every horizontal and above every vertical row are numbers. See the simple example below. Every number means one group of black cells. A 1 means 1 black cell on a row, a 2 means 2 black cells on a row, etc. Between two groups of cells must be one or more white cells.

		2	2	2	
	3	1	1	1	3
1					
3					
2 2					
1 1					
5					

By logical thinking, you can know whether a cell is black or white. Beside the lowest row is a 5 and the row is only 5 cells long, so every cell in that row is black. Above the first vertical row is a 3. The lowest cell in that row is black, so there is only one possibility for those three black cells. The 3rd and 4th cell are black too. The 1st and 2nd cell are white. If you go on like this, the picture will slowly appear. (Tip: place a dot in a cell if you know it must be white.)

How do Japanese Puzzle with several colors work?

Some Japanese Puzzles have several colors. Besides black there are also, like, red cells in the picture. A number beside the row is in red. For example, if there is a **3**, there is a group of 3 red cells next to each other. In that row. Between two groups of different colors (like **2 3 1**) there don't have to be white cells.

What can you do with LogTek Puzzle Maker?

With this program, you can create Japanese Puzzles yourself in a simple way. The program is a simple drawing program. You can make pictures with it by painting cells. You can print the puzzle. The program then counts all cells next to each other with the same color and prints the puzzle.

Puzzles cannot be larger than 50 cells in the width and 50 cells in the height. You can't use more than 8 colors, but believe me: that's more than enough. The puzzle solver doesn't like to make a puzzle with a lot of different pencils.

Besides this design program, there is also the LogTek Puzzler which you can use to try solving puzzles on your computer. This program is meant to be the computer alternative to puzzling, and it can give you information about the solution and errors that you've made.

Is every puzzle solvable?

No. You often 'get stuck'. You don't come any further then. Therefore I recommend you to test every puzzle yourself before you give it to someone or use it for commercial things. You can test the puzzle by printing it. You can also test the puzzle in the program itself. There is even a computer test which can do that for you. For the details of the computer test, see the text **All functions on a row**.

How are the puzzles saved?

The program separates black and white puzzles and color puzzles. Black and white puzzles are saved as Portable Bitmaps (pbm-files). Color puzzles are saved as Portable Pixelmaps (ppm-files). Both filetypes are also known by many 'big' drawing programs, like Paint Shop Pro. Every pixel is one cell of the puzzle.

The color puzzles are saved in an unusual format, so some program won't be able to open them. They are valid ppm-files, however, and there are programs that can open them!

All functions on a row

Below is a list of all menu items with descriptions.

File > New

Create a new puzzle. You can choose to create a black and white puzzle or a color puzzle. Please care these statements:

- A color puzzle can actually be black and white, if you only use the colors black and white.
- You can save a black and white puzzle as a color puzzle, if you want to start using colors in it.
- Black and white puzzles use (much) less disk space when you save them, but the color puzzles are still only a few kb.

File > Open

Open an existing puzzle.

File > Save

Save a puzzle with its current name. If the puzzle doesn't have a name yet, you will be asked for a name.

File > Save As

Save a puzzle with a new name. If you want to save a black and white puzzle to a color puzzle, you can do that too.

File -> Import Image

You can open images to convert them to puzzles. Keep in mind that most images will look quite bad when they are reduced in size or when the number of colors is reduced. The following images can be imported: bmp, gif, jpg, ico and cur.

File > Print Puzzle

If you click here, a new window appears, on which you can choose a lot of things. Most options are clear. I'll describe only a few.

- You can select "background color". If you do this, the color which is used for the puzzle, will much lighter be the background color of the print. That means every time one row has a background color and one has not, horizontal and vertical. This makes it more clearly. You can better see which number is of which row.
 - You can best let the size be automatic. The program will make the puzzle as big as possible. If you choose manual, you can make the puzzle smaller, not bigger!
- If you now click on the "Print" button, the puzzle will be printed.

File > Test Puzzle

If you click here, the "Test Puzzle" window will be opened. The puzzle is now displayed as a real puzzle. You can now try to solve the puzzle.

While you are testing a puzzle (or puzzling with the LogTek Puzzler program), you can click on the puzzle's numbers to mark them. This can be helpful to remind you which numbers you have already retraced.

You can also choose to let the program try to solve the puzzle. This test needs some information.

Japanese Puzzles can be tested by thinking logically to conclude which color certain cells must have. The methods two derive such conclusions, can be divided into two main methods. The first one is the easiest: by looking at one row or column and comparing its numbers with known cells, colors of other cells can be identified. This method consists of several heuristics, which are sufficient for solving most Japanese Puzzles. When these heuristics fail, however, the colors of cells can also be guessed in an attempt to find contradictions. *When this cell is black, that one must be white so that one must be black... Hmm, that's not possible.*) This second method is much more complicated.

The computer test of this program uses only the first method. That means that puzzles can sometimes be solved, but the computer test fails to do so. If you are going to make difficult puzzles that require the second method, you have to test puzzles manually as well.

The computer test can be quite slow, depending on the puzzle. If it takes lots of time, you can click on "Stop". The test will then be interrupted within a reasonable time.

Finally a word on puzzles that can have multiple solutions: the computer test won't be able to solve such puzzles. When you manually reach a suitable solution that differs from the original puzzle, the program will not consider this a correct solution.

File > Exit

I guess this option is clear. There is a time of coming and there is a time of leaving...

Edit > Change Size

If you want to change the size of the puzzle, click here. You can type the width and height you want.

Edit > Fit Size

If you click here, the size will be fitted to the picture. All empty rows under, above and beside the picture will be removed. You'd better not use this option if you've only painted a few cells, because the puzzle will then become very small.

Edit > Make Negative

It isn't really a drawing program, but I like a simple effect like making negative.

Edit > Drag

Sometimes it's very useful to drag your picture, so you can draw something beside it.

Language > ...

Change the language.

Help > Help

If you click there, this document will be opened. (If the language is Dutch at that moment, the Dutch document will be opened.)

Help > About The Maker

For those who are interested in my name. I'll save your valuable time: my name is Peter Moor.

Help > www.Moor-Software.com

If you click here, my website will be opened automatically. (If you have no internet connection on the moment, it won't work.)