

Sudoku Addict User's Manual



Program Version 1.18
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Introduction

Thank you for trying Sudoku Addict by TealPoint, the addictive puzzle numbers game for PalmOS handhelds.

Contents

This archive contains the following files:

Program files:

| | |
|--------------|--------------------------------|
| TEALSUDO.PRC | The Sudoku Addict program file |
| TPSETUP.EXE | Windows easy-installer program |

Document files:

| | |
|--------------|---|
| SUDODOC.PDF | This document in Adobe Acrobat (PDF) format |
| SUDODOC.HTM | This document in HTML format (sans images) |
| SUDODOC.PRC | This document in TealDoc format |
| REGISTER.HTM | TealPoint Registration form in HTML format |
| REGISTER.TXT | TealPoint Registration form in text format |

Installing

On a Windows PC you can also use quick setup installer by double clicking on the **TPSETUP.EXE** installer program, and following the on screen prompts.

For other systems:

1) Install Program

Use the Palm Install Tool that comes with your organizer to install the program file **TEALSUDO.PRC**. The Palm Install Tool can be found as an icon along the left hand side inside the Palm Desktop program on your desktop computer. Instructions on how to use the Palm install tool are in the Palm Handbook or electronic manual that came with your handheld.



2) Install Documents

You can optionally also install **SUDODOC.PRC**, a copy of this document in Palm “Doc” format suitable for reading with a Doc reader like **TealDoc**.

Terms used in this document

Hardware Buttons:

The four physical buttons (e.g. date, address, todo, and memo) typically located in a row at the bottom of your handheld

Scroll Up/Down Buttons:

The physical rocker switch at the bottom center of the handheld

Five-way control:

On newer handhelds, a 5-way control replaces the scroll up/down buttons, adding left and right movement and a center select button.

Graffiti:

The special letter-like symbols you write to enter text with your stylus.

Graffiti Entry Area:

The rectangular area at the bottom of the display screen where you can write letters in graffiti.

Silkscreen Buttons:

The four printed circular tap areas (Home, Menu, Calculator, and Find) to the left and right of the graffiti drawing area.

Menus:

The drop-down menus you get when tapping on the silkscreen menu button, or tap on the title bar (if present) on a device running PalmOS 3.5 or higher.

Chapter 1 – Game Play



Meaning 'single number' in Japanese, Sudoku (or 'Su Doku') are simple but highly addictive puzzles that have displaced crossword puzzles in many newspapers in Japan and Great Britain.

Sudoku Addict by TealPoint brings this phenomenon to your handheld, adding intuitive controls, handy annotation features, and powerful puzzle-solving capabilities.

The Challenge



Sudoku is played on a deceptively simple board. Numbers are written into a square 9x9 grid that is subdivided into nine 3x3 boxes.

To win, simply fill in the blank cells so that every row, column, and 3x3 box contains each of the digits 1-9 exactly one time, with no duplicates or missing numbers.

Starting a Game



To start a game, select the "New Game" button on the main screen. The **New Game** window will open.

Difficulty Levels

Choose a puzzle difficulty level: Easy, Medium, or Hard. Different puzzle difficulties require potentially different strategies (covered in the next chapter) to solve. The toughest puzzles have a 5-star difficult rating, while all Easy puzzles are only one-star in difficulty. Medium puzzles range from two to three stars.

Puzzle Number

You can also specify a particular puzzle to play by puzzle number (from 1-1000) which lets you come back to challenge a friend with the same given puzzle at a future date.

Manually-Entered Puzzles

If you want to play a puzzle from another source, say a newspaper or puzzle book, you can even choose the "Manual" option, which lets you start with a completely blank screen. You can even use the "Solve" option (below) with puzzles you've entered manually.

Entering numbers

Enter numbers by tapping cells with the pen or selecting them with your device's 5-way navigator control (if present). A popup number pad will appear allowing you to choose what number to go into the cell.



Training Mode

If you started the game in **Training Mode**, the number pad will appear with only valid (non-conflicting) choices boxed. This makes the game much easier to play while you're still learning the strategy. You can't turn *Training Mode* on or off once a game has started, however, and there is a point penalty equal to one-half of your base score for using *Training Mode*.



Pencil Entry

When you're not sure what should go into a cell, you can also add annotations to a cell to help you figure out the answer. Just tap on a cell after selecting the "Pencil" pushbutton in the lower right corner of the screen. A number pad will appear, but this time you can select up to six small numbers to display in the cell at once. Marks like this are traditionally used to help remember possible contents for a specific cell.

Keyboard Shortcuts (New in 1.18)

It's also possible to enter numbers using a device keyboard or Graffiti. Simply enter a number to be placed in the cell. In *ink* mode, the number will be placed in the cell, replacing any current contents. In *pencil* mode, the number will either be added to the cell or removed if it already exists.

To clear the contents of a cell, enter a backspace. To change its current contents from pencil to/from ink, enter a space. When going from pencil to ink, if more than one number is present, the lowest selected number will be chosen as the inked number.

Hints



If you get stuck playing a puzzle, you can select the *Hint* button to get help. Choose from the following options:

Hint – reveal a single tile that can be deduced from the other numbers on the board using simple strategies.

Check – check whether the current tile values leave the board in a solvable state, or whether a mistake has been made somewhere.

Solve – completely solve the puzzle and end the game.

If you solve the puzzle a *Swap* button will appear that lets you toggle back and forth between the solution and the last state of the board. **(New in 1.18)**

A 2000-point penalty will be subtracted from your score for every hint you get, and no high score will be awarded if you using the Solve option.

NOTE: If you have entered an incorrect number on the board the current puzzle may not be solvable until you correct the error. Hints are also based on the current board contents, so a returned hint may not be part of the correct answer if you've entered incorrect numbers.

Save/Restore

While playing a game, you may save the current state of the board at any time by using the "Save Board" drop down menu. You can then later "Restore" to this point later if you make a mistake. This feature is invaluable when solving *Hard* difficulty puzzles that require some guesswork to complete, but you can only save and restore boards from within the same game.

Undo

Choose the "Undo last move" menu to reverse recent changes to the board one cell at a time. You can backup up to 50 changes from your last move.

Scoring

Base scoring is awarded for the fastest completion. A bonus 2x or 3x multiplier is then given respectively for 'Medium' and 'Hard' difficulty puzzles. If you played in *Training Mode*, a penalty will be assessed equal to 50% of your score. Finally, a 2000-point penalty is subtracted from the final score for every 'Hint' or 'Check' requested and given during the game.

The maximum total score is 100000 points (hard difficulty done instantly with no hints and not in *Training Mode*).

Chapter 2 -- Strategy

To figure out what numbers go where, use logic, perseverance, and for 'hard' puzzles a little methodical trial and error.

Easy Puzzles (basic strategies)

Basic strategy consists of 'looking for the ones'. Examine every row, column, or box, looking for digits needed to make it complete. Look for instances where a missing digit can only go into one blank space because the other possibilities would conflict with a neighboring row, column, or box.



For instance, in the example pictured, we know that the 3x3 box in the upper right must contain the number "2". Using a process of elimination, we can locate the "2" in the upper left corner of this box, because the other five blank cells would conflict with twos in other rows or columns.

You can also use the inverse of this method: narrowing down blank cells to one number because all other possible values for that cell would cause conflict. 'Easy' puzzles can be solved with basic strategies like these.

Medium Puzzles (advanced strategies)

More advanced logic is sometimes needed to solve 'Medium' difficulty puzzles. These involve deducing cell values based on the possible contents of neighboring blank cells.



Twins and Triplets

One advanced strategy is to find "Twins" and "Triplets". For instance, in the example pictured, we know that the 3x3 box in the upper right must contain the number "6". Using neighboring rows and columns, however, we are only able to eliminate the two cells stacked vertically in the middle of the box.

We can get more information, however, if we also look at the 3x3 box below in the middle right. This box also needs a "6" and using basic strategy we can narrow down the possibilities to one of two spaces in the left column of this box. Since either of these locations would conflict with the first column in the upper left box, we can strike out that column from that box and locate the "6" in the lower right cell.

Hidden Pairs and Triplets

Another advance strategy, “Hidden Pairs” and “Hidden Triplets” involves finding a subset of cells in a row, column, or box that are the only possibilities for an equal number of missing numbers.

For instance, imagine you have a row that has a fair number of missing numbers. Two of the numbers are, say, 3, and 8, and there are exactly two cells left that can either contain the 3 or the 8. There are still other empty cells in the row, but none of them can contain either a 3 or an 8.

To help in this example, let’s introduce some simple markings often used to by Sudoku enthusiasts. When solving a newspaper puzzle, it’s common to use a pencil to write small numbers into unknown cells. These numbers are reminders for what numbers might go into each cell. As more logic is applied, these small numbers can be progressively erased or crossed out. When only one remains in a cell, that’s the contents that must go there.

In this example, the row might look something like this:

[9] [45] [945] [2] [38] [59] [1378] [74]

Since you have two empty cells that can hold two missing numbers, then one of the cells must contain the 3, and the other must contain the 8. Even if you don’t know which is which, you know that no other number can go into either cell, which can narrow down the possible locations for all other missing numbers in that row.

[9] [45] [945] [2] [38] [59] [38] [74]

Knowing this lets us determine the contents of the last cell in the row, as it’s the only place left for a “7”.

Matching Pairs and Triplets

A more complex advanced strategy, and one that is a little tough to illustrate, is that of “Matching Pairs” and “Matching Triplets”. These can be applied when a number of cells in a row, column, have no other possibilities beyond a matching count of missing numbers.

For example:

[9] [45] [12] [276] [25] [8] [125] [74]

In this row, three cells (third, fifth, and seventh from the left) have been narrowed down to possibilities of exactly three numbers: the digits 1,2, and 5. None of these cells can contain any numbers other than 1, 2, or 5, so we know that no other cell can contain any of these numbers, and we can simplify the possibilities to:

[9] [4] [12] [76] [25] [8] [125] [74]

Hard Puzzles (sweat and tears)

Hard puzzles cannot usually be solved by logic alone. Instead, they often require some guesswork to complete. This means that you must take an educated guess, and play forward with the puzzle until you either complete it or determine that it is unsolvable with the guess you made. If the latter, you must undo back to the point of your guess and make a different guess.

Appendix A – Products

TEALAGENT (<http://www.tealpoint.com/softagnt.htm>)

A PC-based Palm data converter, installer, and web clipper which formats local, network, and web-resident data into standard Palm formats.

TEALALIAS (<http://www.tealpoint.com/softalia.htm>)

Making the most of expansion memory, TealAlias creates placeholder alias files that automatically find, load, and launch apps and data from external SD cards, freeing precious main memory.

TEALAUTO (<http://www.tealpoint.com/softauto.htm>)

The complete automobile mileage, service, and expense tracking program, TealAuto, supports unmatched features and customization options.

TEALBACKUP (<http://www.tealpoint.com/softback.htm>)

Backup your valuable data with TealBackup, supporting manual and automatic backups to SD/MMC/CF cards and Memory Stick, backups through HotSync, and optional compression and encryption.

TEALDESKTOP (<http://www.tealpoint.com/softdesk.htm>)

Launch applications with TealDesktop, the themed replacement for the standard system launcher screen with tabs, multiple card folders, drag and drop, and more

TEALDOC (<http://www.tealpoint.com/softdoc.htm>)

Powerful reader for Palm documents, e-books, and newspapers, supporting advanced features such as pictures, links, and flash cards.

TEALECHO (<http://www.tealpoint.com/softecho.htm>)

Digital "ink" lets you see what you write, vastly increasing graffiti writing speed and accuracy. No more writing blind!

TEALGLANCE (<http://www.tealpoint.com/softglnc.htm>)

Pop-up utility shows time, date, appointments and to-dos, and other useful information at power-up. See your day at a glance.

TEALINFO (<http://www.tealpoint.com/softinfo.htm>)

A system for creating and displaying interactive databases, reference works, and mini-application folios; a handheld reference library.

TEALLAUNCH (<http://www.tealpoint.com/softlnch.htm>)

A pop-up application launcher and mapping utility for launching apps and special functions from pen taps, graffiti strokes, or button presses.

TEALLOCK (<http://www.tealpoint.com/softlock.htm>)

Secure automatic locking program with optional data encryption and numerous activation and customization options.

TEALMAGNIFY (<http://www.tealpoint.com/softlens.htm>)

An ever-ready magnifying glass that works with most any program, TealMagnify saves your eyes when looking at tiny text.

TEALMASTER (<http://www.tealpoint.com/softmstr.htm>)

A supercharged Hackmaster replacement with 100%-compatibility and enhanced stability, configuration, diagnostic and activation features.

TEALMEAL (<http://www.tealpoint.com/softmeal.htm>)

A personal restaurant database and selection wizard. Keep a database of your favorites and easily find them by type or category.

TEALMEMBRAIN (<http://www.tealpoint.com/softmemb.htm>)

Memory monitor and stack manager which helps identify conflicts and greatly improves stability running multiple hacks and drivers.

TEALMOVER (<http://www.tealpoint.com/softmovr.htm>)

File management utility for beaming, deleting, renaming, and copying files both in memory and on VFS-compatible storage cards.

TEALMOVIE (<http://www.tealpoint.com/softmovi.htm>)

High-quality multimedia system with video and synchronized sound. Includes audio/video player and Windows AVI converter program.

TEALNOTES (<http://www.tealpoint.com/softnote.htm>)

Insert freehand graphic "Sticky Notes" into memos, to-do lists, address book entries--almost anywhere you currently have editable text.

TEALPAINT (<http://www.tealpoint.com/softpnt.htm>)

The most powerful paint and sketch app on Palm OS handhelds, featuring 16 tools, 16 patterns, 12 brushes, color, and desktop image conversion.

TEALPHONE (<http://www.tealpoint.com/softphon.htm>)

A powerful Address Book replacement with superior interface, display, search, and indexing options.

TEALPRINT (<http://www.tealpoint.com/softprnt.htm>)

The all-in-one text and graphic printing solution for Palm OS, supporting infrared, serial, and HotSync printing to any Windows printer.

TEALSAFE (<http://www.tealpoint.com/softsafe.htm>)

A personal encrypted data vault and wallet for computer passwords, credit card numbers, calling cards, software registration codes, PIN numbers, bank accounts, business contacts, journal entries, or any other sensitive information. A must for features and security.

TEALSCRIPT (<http://www.tealpoint.com/softscrp.htm>)

An improved, tuneable, Graffiti text recognition system that lets you modify the handwriting recognition to suit your handwriting.

TEALTOOLS (<http://www.tealpoint.com/softtool.htm>)

Six pop-up desk accessories, including a calculator, clock/stopwatch, preferences panel, editing panel, memopad, and a file/backup manager.

TEALTRACKER (<http://www.tealpoint.com/softtrac.htm>)

Track time and expenses with a fast, easy to use interface that requires minimal effort. Generate reports and export data to a spreadsheet. TealTracker is your personal time clock.

SHORTCIRCUIT (<http://www.tealpoint.com/softshrt.htm>)

A new twist on gameplay fused from your all time action puzzle favorite games, connect falling conduit pieces into explosive loops in this frantic race against the clock.

Appendix B – Revision History

Version 1.18 – July 11, 2006

- Added support for using keyboard/graffiti to enter numbers into cells ('1'-'9')
- Added support for using keyboard/graffiti to clear cells (backspace)
- Added support for using keyboard/graffiti to toggle cells between ink/pencil (space)
- Added 'swap' button to toggle board to/from previous state after solving
- Added option to solve puzzle from start if not solvable from current state
- Added highlighting of cells differing from solution when solved from start
- Fixed minor drawing glitches drawing game board border when using 5-way nav
- Improved 5-way navigation to select cell after tapping on with pen

Version 1.16 – November 11, 2005

- Fixed intermittent rare crashes on Treo 650 when tapping on tile space

Version 1.15 – November 2, 2005

- Added menu option to clear high scores
- Added support for new Palm Z22 handheld
- Added fix to workaround to prevent crashes due to bug in system sound library on Zire31 and Tungsten T3
- Fixed odd entries in default high scores

Version 1.03 – August 12, 2005

- Added cancel button to pencil/ink keypads
- Increased maximum pencil count to 6 digits
- Darkened pencil marks for easier reading on light displays
- Fixed saving of game when switching applications on pause screen

Version 1.02 – August 11, 2005

- Fixed ability to undo cells to blank when entering manual puzzle

Version 1.01 – August 4, 2005

- Updated manually entered games to display initial tiles as unchangeable
- Improved 5-way highlighting from drawing on game board when game is not in progress

Version 1.00 – August 1, 2005

- Initial Release

Appendix C – Manual Credits

Manual by Vince Lee

Appendix D – Contact Info

Sudoku Addict by TealPoint Software
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We look forward to hearing from you.

Please visit us at www.tealpoint.com, or email us at contact@tealpoint.com.

Appendix E – Registering

Registering allows you to use the program past the 30 day expiration period and turns off registration reminders.

Currently, you may register by snail mail or online with a credit card and a secured server from the store where you downloaded the software. For the first option, send the following information on a sheet of paper separate from your payment.

- Product Name
- E-Mail Address
- HotSync User ID (Pilot Name Required for Passkey generation. It can be found on the main screen of the HotSync application on the Pilot as "Welcome _____" or in the corner on a PalmIII or higher)
- Check (drawn off a US Bank) or Money Order for (\$14.95 US). No international checks or money orders please.

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