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## Search32

The Fastest 32 Bits Search Tool For Windows 95 Copyright © Anet Inc., 1995 - 1997

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## **Concept and Designated Purpose**

Welcome to Search32, the fastest 32 bit search tool for Windows 95 environment!

Easy to use!

Search32 is designed to perform word-based <u>search queries</u> on large groups of text (ANSI) files with a total size of tens, or even hundreds, of Megabytes.

Standard search programs, such as Windows 95's Find tool, perform their searches in a direct manner, scanning an entire disk for matching files. This takes a noticeable time, especially when a large amount of information is scanned.

Search32 tool uses another approach to retrieve the information sought. Search operations are based on a set of specially created ancillary <u>index files</u>, rather than on the original text (ANSI) files. Of course, this technique requires additional disk space. Index file size is usually 30 - 60 % of original text files total size. This method allows Search32 to perform <u>search queries</u> amazingly fast. This approach is especially useful when it is necessary to perform numerous search queries based on the same index.

## **Search Queries**

A search query is a word expression composed in accordance with <u>search</u> <u>query syntax</u>. Execution of any search query uses a currently loaded index. To perform any search query you must create at least one <u>index</u>. See <u>'Operations on indexes'</u> to create an index on a group of text (ANSI) files.

To perform a search query:

- 1) Make Search tab the current tab.
- 2) Select (load) the index desired index from the Index being used combo box. An empty index list (in which case the search is disabled) indicates there is no index in the <u>index folder</u>. If no index is available or the existing indexes do not cover your needs, create a new one. See <u>'Operations on indexes'</u>.
- 3) Make sure the Update Index button is disabled. Otherwise, update the index.
- 4) Enter a proper search expression in Enter search expression combo box or choose one from the combo box list. See <u>search query syntax</u> topic for help with correct search expressions.
- 5) Execute the query by pressing OK button.

Once the query has been successfully executed displayed are:

The total number of files and entries found

The list of matching files found

Full text view of the currently selected file in file viewer window below.

Navigate forward and backward through the resultant entries using either the navigation scrollbar at the bottom of the file viewer window or F2 and F3 keys.

#### Other features:

- \* To search for a selected word while in the file viewer window click right mouse button and choose Search for Selected Word menu item or use the current hot key combination. (Double click to select a word).
- \* To re-search any word among files found click right mouse button and choose Search among Files Found.
- \* To customize View Options for the file viewer window click corresponding pop-up menu items. For more information see <u>View Options</u> topic.
- \* To run a program associated with resultant file double click the file name from Files found list box.
- \* Click right mouse button (or <Shift> + right mouse button) to show a context sensitive menu for the currently selected file, enabling shell operations on that file such as Open, Print, Quick View, Properties, etc. To

see Quick view in the menu you must first install it. Use Control Panel \ Add/Remove Programs \ Windows Setup \ Accessories.



- 1) It is possible to perform a search query on an out-of-date index and get true search results for files that are not marked as <Modified> or <Deleted>. Such search results do not display newly created or modified files.
- 2) If files presented in current search results are modified or deleted after the results have been received, they will be labelled as <Modified> or <Deleted> accordingly. In case of an automatically updateable index you will be notified that the index has been changed. To get up-to-date search results first update the index (unless it is automatically updateable) and repeat the search query.

#### **Index Files**

Index files (an index) is a set of special ancillary files allowing amazingly fast performance of a <u>search query</u>. No search query is possible if no index exists. Before carrying out a search, you must create at least one index. See <u>'Operation on indexes'</u> topic to see how to create, update and remove indexes. A valid index always consists of one file with generic name and INF extension and several groups of files with the same name and the following extensions: WTB, RTB, ENT and STS. The group names are constructed as follows: generic index name + group number (starting from zero). Index files contain information about all entries of any particular word from the origin indexed text (ANSI) files and provide fast access and data to retrieval.

When Search32 is launched all indexes available are out-of-date unless they have been updated at launch. Indexes should be updated at launch to ensure that all file changes since the program's last run are included in subsequent searches. Once an index is updated, it becomes up-to-date.

While Search32 is running, even up-to-date indexes, unless they are automatically updateable, can become out-of-date if relevant files are changed. Note, up-to-date status of an index is indicated disabling either the Update Index button from the Search tab or the Update button from the Indexes tab.

For information on automatically updateable indexes see <u>Index Options</u>.



- 1) Store all indexes in a single folder, making it the <u>index folder</u> for <u>Search32</u>, so all indexes can be easily accessed from the <u>Index being used</u> and the <u>Index name</u> combo boxes in the <u>Search</u> and <u>Indexes</u> tabs respectively.
- 2) Perform all operations on indexes only via Search32 interface.
- 3) Try to work with many indexes of moderate size rather than one huge index. This minimizes the time required to create, update or load an index and, to a lesser degree, perform <u>search queries</u>. You can more easily free disk space by removing any index if it is no longer needed.

## **Search Query Syntax** Examples

A search query expression has the following syntax:

```
[^]word1 <op> [^]word2 <op> [^]word3...
```

where word1, word2, word3 and so on are the words sought, optional symbol '^' stands for a boolean NOT operation and required <op> symbol can be either '&' or '|', standard signs for boolean AND and OR operations respectively.

## **Word's Symbols:**

The following symbols are detectable as valid word symbols: +, \_, a - z, A - Z, 0 - 9 and \* . Upper and lower-case letters are the same, search queries are CASE INSENSITIVE. Asterisk sign represents an arbitrary non-zero number of valid word symbols and can be placed at the beginning and/or end of the word. For example, \*map, bit\* and \*tma\* all match word 'bitmap'.

## **Boolean Operations:**

If you wish for any queried words to get all matching files and the word's entries in them provided that EACH file must contain ALL the words queried, you should apply AND operation. For example:

word1 & word2 - shows all files and entries in them where both words are presented

If you wish that EACH resultant file must contain ANY ONE (or more) of the words queried, you should apply OR operation. For example:

word1 I word2 - shows all files and entries in them where either word1 or word2 is presented

If you wish to get all files <u>not</u> containing any word queried, you should apply <u>NOT</u> operation for that word. For example:

```
^word - means to show all files not containing word.
```

## **Using parentheses:**

The precedence of AND and OR operations are the same, a search query expression is parsed from left to right, so word1 | word2 & word3 is not the same as word2 & word3 | word1. To ensure the correct precedence use parentheses. For example:

```
(^(word1 & word2) | word3) & word4
```

## **Examples of improper search expressions:**

```
^^word - two signs 'NOT' should be delimited by paretheses: ^(^word). Avoid double negative syntax.
```

((word1 | word2 ) & word3 - number of left and right parentheses are not equal.

a & verylongwordwithlengthmorethan32symbols - very short and very long words to search.

## **Operations on Indexes**

Search32 interface provides the following operations on <u>indexes</u>: creating, updating, removing and switching between existing indexes.

#### To create a new index:

- 1) Make Indexes tab the current tab.
- 2) Fill in the Index name combo box with generic name of the index you want to create. Location for the new index is defined by current <u>index folder</u>.
- 3) <u>Browse for files to index</u> or fill in the <u>Location</u> of files to index text box with a line using the following syntax:

```
[+|-]pathname1[+]; [+|-]pathname2[+]; ...,
```

where pathname1, pathname2 and so on are full pathnames for files to index, delimited from each other with semicolon. Wildcard symbols '\*' and '?' are available. Optional sign '+' or '-' at the beginning of a particular pathname item specifies whether or not to include the item from the entire index scope. Optional sign '+' at the end of the item specifies whether or not to process subfolders. Example:

```
c:\*.txt+; -c:\tmp\*.txt; c:\mypas files\*.pas+
```

This syntax covers all files with .txt extensions from drive 'c' excluding those located in 'tmp' folder as well as all files with .pas extensions from 'mypas files' folder and all it subfolders.

- 4) Customize parameters from the <u>Index Options</u> frame.
- 5) Press the Create button. Watch the status bar at the bottom of the window while indexing. Note that the index creation time varies depending upon total size of indexed files and the performance of your computer.

## To update an existing index:

- 1) Make Search or Indexes tab the current tab.
- 2) Select an index you want to update from the Index being used (while in the Search tab) or Index name combo box (while in the Indexes tab).
- 3) While in the Indexes tab modify (if necessary) the list of indexed files for that index in Location of files to index text box. Use <u>Browse</u> button instead of editing this text box manually.
- 4) Press Update Index button (while in the Search tab) or Update button (while in the Indexes tab) and watch the status bar at the bottom of the window.



Text files that have been previously indexed but are not included in the new list are removed from the updated index. Old versions of the same files are replaced with new versions. Unrevised files remain untouched in updated index.



Disabled Update button indicates Up-to-date status of a selected index. As soon as you modify contents of the Location of files to index text box, the Update button becomes enabled.

## To remove an existing index:

- 1) Make Indexes tab the current tab.
- 2) From the Index name combo box select the index you want to remove.
- 3) Press Remove button.

#### To switch between existing indexes:

1) Select (load) any index you want from either Index being used combo box in Search tab or Index name combo box in Indexes tab. When using the Index name combo box you are able to view Notes text box and Current index statistics and options frame. Both refer to the currently selected index.

Index folder is shown by Index folder locked text box at the top right corner of Indexes tab. It specifies the folder where all current <u>indexes</u> are located. To change index folder press the Change command button and choose any folder you want using Browse for index folder dialog box.

#### **Interface Overview**

Search32's interface allows users to perform word-based <u>search queries</u> and <u>operations on indexes</u> as well as customize <u>Search32's</u> start behavior, hot key combination, file view and index monitoring options. These correspond to the five main dialog boxes: <u>Search, Indexes, Properties, View Options</u> and <u>Monitoring</u> tabs respectively.

While in the Search tab you can:

- 1) Select (load) an <u>index</u> you want from the list of indexes currently available.
- 2) Update the selected index if necessary.
- 3) Enter and execute a new word <u>search query</u> or one from the <u>list of current search session queries</u>.
- 4) View the results of an executed query: the total numbers of files and entries found, the list of matching files found and full text view of any resultant file with internal viewer.
- 5) Quickly navigate through the entries found in the file viewer window.
- 6) Easily re-search for any word among files found.
- 7) Easily search for any selected word while in the file viewer window.
- 8) Customize View Options with right-click pop-up menu while in the file viewer window.
- 9) Run the program associated with any particular matching file found (for example, to edit the file).
- 10) Execute any shell operation available in a right-click pop-up menu upon a selected file.

While in the Indexes tab you can:

- 1) Select (load) an <u>index</u> you want from the list of currently available indexes.
- 2) Create a new index for a group of text (ANSI) files.
- 3) Update an existing index.
- 4) Remove an existing index.
- 5) Change current index folder.
- 6) View statistics and view and/or edit notes and options for the currently selected index.

While in the Properties tab you can:

- 1) Customize Search32 start behavior options.
- 2) Specify hot keys combination.

See <u>Properties Tab</u> for more information.

While in the View Options tab you can:

1) Check/uncheck Stay on Previously Selected option.

- 2) Check/uncheck Word Wrap option.
- 3) Choose font and background color for the file viewer. See <u>View Options Tab</u> for more information.

While in the Monitoring tab you can:

- 1) Specify whether index monitoring is normal or suspended.
- 2) Define the list of not monitored folders.
- 3) Specify whether to monitor Index and Windows folders. See <u>Monitoring Tab</u> for more information.

All previously executed <u>search queries</u> are accumulated and become available during the current search session from the <u>Enter search expression</u> combo box.

## Configuration file Search32.ini

All parameters stored in configuration file Search32.ini can be adjusted from Search32, so there is no need to edit it directly. Configuration file Search32.ini is automatically rewritten each time you exit Search32. It is located in the same folder as Search32.exe. Search32.ini stores the following parameters:

## [Indexes]:

- 1) An index folder.
- 2) Generic name of the index with which you last worked.



When Search32 is launched, it reads the parameters from Search32.ini and loads all the <u>indexes</u> located in the index folder making the index with which you last worked the current index. If Search32.ini doesn't exist or contains improper parameters, the folder containing Search32.exe becomes the index folder. In this case the executable makes the first found index the current index.

## [Properties]:

- 1) Search32 start behavior parameters.
- 2) Letter key of hot key combination. See <u>Properties Tab</u> for more information.

## [View Options]:

- 1) Stay on Previously Selected option.
- 2) Word Wrap option.
- 3) Font and background color for the file viewer. See <u>View Options Tab</u> for more information.

## [Monitoring]:

- 1) Comma delimited list of non-monitored folders.
- 2) Index and Windows folders monitoring options.

See Monitoring Tab for more information.



Normal/Suspended monitoring option isn't saved in Search32.ini file. It is Normal by default and can only be changed while Search32 is running.

## [Registration]:

- 1) Registration number.
- 2) Registration password.

## [Miscellaneous]:

1) Comma delimited list of box.	file types used in	ı Add Files to Be Ind	dexed dialog

#### **Browse**

Pressing Browse button opens Add Files To Be Indexed dialog box to define the list of files to be indexed, instead of manually filling Location of files to index text box.

Determine the list of files to be indexed by using Add Folder or Add Files command buttons.

- 1) Add Folder: add all files of the currently selected type (see File types select: combo box) from the currently selected folder (see Folders: list box).
  - 2) Add Files: add only the selected files from Files list box.

Multiple selections are available. Use standard Windows technique to select. With Subfolders check box specifies whether a particular item added includes subfolders.

Exclude From Index check box specifies whether a particular item added is excluded from the index scope.

All actions are reflected in the Result text box at the top of the dialog box. Edit this text box using syntax that is exactly the same as Location of files to index text box.

See 'Operations on indexes' topic for help.

Press Clear All button to clear Result text box contents.



Use of \*.\* (All files) for creating the list of indexed files is not recommended, because along with files of text (ANSI) format, improper formats, e.g., executables, help files and so on, implicitly come into the list. The program does not check indexed files for their formats.

## **Index Options**

## **Automatically updateable:**

Specifies whether the current index is updated in background whenever relevant indexed files are changed, newly created or deleted. This relieves the user from periodic tiresome index updatings and assures indexes are upto-date. Note, such indexes are updated at Search32 start independent of Update all indexes at start check box status (Properties tab).



- 1) The system monitors changes only in folders that existed at the time the index was created. New folders will not be subject to updates, even if they are covered by the index scope. To update files in new folders, go to the Indexes tab, enable Update button (by entering a space at the end of Location of files to index text box contents) and update the index.
- 2) Search32 does not provide automatic updates of remote indexes. See Comments on Microsoft Networking for information about remote indexes.

#### Language:

Now supports the following languages:

- 1) English
- 2) English + Russian
- 3) English + German
- 4) English + French

If you are certain that you are working with only English texts, you should choose English coding while creating an index. This eliminates the inclusion in the index of any "words", consisting of improper characters encountered in text files. When indexing files choose the appropriate language.

## Maximum and Minimum word length:

Specifies a maximum and a minimum word length while indexing or for a currently selected index. Words with greater or lesser length are ignored while indexing and searching. You cannot enter a maximum greater than 99 or a minimum less than 1.

## **Compacting ratio:**

Specifies the number of deleted files allowed to be stored in an index. When indexed files are deleted from the disk and Search32 updates relevant indexes, it doesn't physically delete them from the index. Rather it marks them as "removed" and ignores them while searching. This greatly speeds updates, but uses additional disk space. If, while updating an index, the number of deleted files exceeds the specified compacting ratio value Search32 re-creates the index.



Note, you can change all editable parameters from the Index Options frame (except Automatically updateable) only when creating a new index (not when updating an existing one).

Use Notes text box to enter any user comments for a particular index while creating or updating it.

## **Distribution Kit and Requirements**

Search32 distribution kit consists of the following files:

hsun32.ex\_keyhook.dl\_readme.txt parsers.dl\_search32.ex\_search32.hl\_setup.exe setup.inf srch32\_d.dl\_shellext.dl

## **Requirements:**

Search32 tool is designed for Windows 95 and Windows NT operating system. It is not compatible with Windows 3.x.

#### **About**

## This product is copyrighted by:

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#### Version 2.02

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## Implementation notes:

This product is based on our Srch32\_d.dll dynamic link library, a powerful engine for indexing and text retrieval operations. Unique algorithms are assembled as a fast, comprehensive, easy to use tool. Its interface functions can easily be built into any 32-bit application to provide speedy search capabilities. **Anet Inc.** is ready to help with your needs for up-to-date text retrieval technologies.

## Multilanguage support:

At this time the following ANSI character sets are supported:

- 1) English
- 2) English + Russian
- 3) English + German
- 4) English + French

For additional language support please contact us at **s32support@anetusa.com** 

## **Search Queries Examples**

All search queries are <u>case insensitive</u>.

Query expression:	Query action:		
car	strings containing car.		Finds all files and text
		Itant file will co	ontain at least one
^car	containing	g car.	Finds all files <u>not</u>
car & lorry	•		ds all files car <u>and</u> e will contain at least e entry of lorry.
car   lorry		ntaining <mark>car <u>or</u> ontain at least c</mark>	nds all files and text lorry. Each resultant one entry of car <u>or</u> one
car & ^lorry	_	ntaining car, plantain at least on	nds all files and text rovided that each file e entry of car and <u>no</u>
^car & ^lorry or ^(car   lor	ry) <u>nor</u> lorry.	Finds all files	containing <u>neither</u> car
^car   ^lorry or ^(car &	lorry) nor lorry.		s containing <u>neither</u> car
bit*	etc.). Ea		Finds all files and text it(e.g. bitmap, bitwise will contain at least
bit*   *bit*   *bit	havebit end with . file will co	ich begin with l in the middl bit (e.g. inhi	s all files containing bit (e.g. bitmap), e (e.g. arbitrary) or bit). Each resultant ng entry for at least

## **Properties Tab**

#### **Run at Windows start:**

Specifies whether Search32 will run at every Windows start.

#### **Update all indexes at start:**

Specifies whether Search32 will update all indexes when it starts. This option ensures that all current relevant files' modifications, deletions and creations are included. Note, automatically updateable indexes are updated at start whether or not Update all indexes at start is checked.

#### Run minimized:

Specifies whether Search32 will run minimized on the taskbar at start.

#### **Hot keys:**

Specifies <Ctrl + 'letter key'> hot key combination, a handy way to find a word from within another active program. Just select the word and press the hot key combination. Results appear amazingly fast. Note, the hot key combination also works when searching for a selected word while in file viewer window.

## Comments on Microsoft Networking

This version of Search32 is local and doesn't provide network users to simultaneously search on remote shared index(es). But a single user can create and search on remote index(es).

When creating a network index, all names of indexed files must be network file names (UNC names) rather than local file names. To ensure this, specify a proper expression in Location of files to index text box while creating the network index. This will make possible to correctly open the files from the displayed search results. For example, the following expression covers all files with .txt extensions from drives C and D of computer named MyComputer:

\\MyComputer\c\\*.txt+; \\MyComputer\d\\*.txt+ For local index this expression looks simply as: c:\\*.txt+; d:\\*.txt+

To load a remote network index follow these steps:

- 1) Using Windows 95 Explorer's Map Network Drive right-click menu item, map network drive that contains a remote index you want to search. This should be done before Search32 begins running.
- 2) Run Search32, go to Indexes-tab, press Change-button to activate Browse for Indexes Folder dialog box and open Select drive combo box. Once step (1) is successfully carried out, mapped network drive is available.

Now, proceed as usual.

## **View Options Tab**

## **Stay on Previously Selected:**

If checked, system maintains selection on the file selected in previous search results. Otherwise, the first file in the list is selected.

## **Word Wrap:**

Specifies whether or not text appears wrapped in the file view window.

#### Font:

Font selection for text in the file view window.

## **Background color:**

Select background color for the file view window. Only pure colors are available.

## **Monitoring Tab** Monitoring:

Normal monitoring ensures all updates of automatically updateable indexes are carried out at the time Search32 detects creations, deletions or modifications of relevant files.

Suspended monitoring detects all changes to relevant files but stores and accumulates them not allowing the system to update indexes. Switching back to Normal launches all suspended updates of relevant indexes.



Use Suspended monitoring when performing extensive file operations that may cause extensive index(es) updates.

## **Exclude from monitoring:**

You may exempt particular folder monitoring. This is useful when the **contents** of a folder are not pertinent to any Search32 index but the folder itself is covered by some index as in the following example: the index with c:\\*.txt+ scope and the folder c:\some folder with extensively changeable contents but not containing any file with .txt extension. Excluding the folder from monitoring saves time when Search32 updates its indexes.

#### Select a folder:

Double click on a folder to make it available for inclusion in the Exclude from monitoring folder list.

#### Add:

Click the button to add the selected folder (displayed with opened case icon) to the exempt list.

#### **Remove:**

Click the button to remove the highlighted folder from the exempt list.

#### Not to monitor Index folder:

Store only index files in the index folder.

## **Not to monitor Windows folder:**

Windows OS uses this folder to store system files that are frequently updateable (swap file, registry database files and others). If you have no indexed files in the Windows folder, it is better to exclude it from monitoring. See Exclude from monitoring section above.