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PROSPELL

SPELLING CHECKER

Disc and ROM

AMSTRAD CPC464
CPC664 & CPC6128

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PROSPELL

SPELLING CHECKER

Amstrad CPC464 CPC664 CPC6128

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The PROSPELL program was developed using the MAXAM assembler ROM.
This manual was written on the PROTEXT word processor and checked using PROSPELL.
MAXAM and PROTEXT are both available in ROM from WACCO.

                                             01-688-6223

1. INTRODUCTION - WHAT CAN PROSPELL DO?

PROSPELL can do several things. First and foremost it will proof read a document and find most mistakes. This includes simple typing mistakes as well as words that are genuine misspellings. PROSPELL will draw your attention to these mistakes - it will not and cannot automatically correct them for you. In doing this PROSPELL has two major advantages over other spelling checkers, it will check the text very quickly and it provides very easy methods for correcting mistakes.

The way PROSPELL works is fundamentally the same as you would check spellings using a dictionary. However this dictionary is contained on a disc, and whereas you would only look up those words you weren't sure of, PROSPELL looks every single word up in the dictionary, at a speed you could not equal manually.

Although PROSPELL cannot automatically correct mistakes it does have one feature that goes a long way towards this. In many cases it is able to look up the correct word in its dictionary. This is possible because most typing and spelling mistakes can be categorised by a few general rules.

One unavoidable limitation to be aware of is that if you misspell a word, but the misspelling is also a valid word then PROSPELL will not notice this as an error. A program that did this would be a "context checker", and development of such programs is included in research into artificial intelligence being carried out at universities throughout the world.

2. GETTING STARTED

1.   ROM version

PROSPELL is supplied in a 16K EPROM which can be fitted into any suitable ROM expansion board. You may find that the legs of the EPROM will need straightening a little in order to fit it. Do this with extreme care by holding the EPROM in the centre (avoid touching the legs) and pressing the side of the legs against a flat surface. Keep the EPROM away from sources of electrostatic charge such as the monitor screen.

ROM numbers

Each ROM, when installed, must have a unique ROM select number so that the firmware may access it. PROSPELL is a background ROM, which means it provides facilities that can be used from other ROMs, such as PROTEXT. The number associated with a background ROM must lie between 1 and 15 (with the 1.0 firmware as on the CPC464 it must be between 1 and 7). PROSPELL may be installed with any valid select number except 7. If you have the Arnor AD1 or AD2 cartridge with MAXAM, PROTEXT, or UTOPIA the cartridge will take ROM 5. Select one of the remaining numbers for PROSPELL - this will be done by choosing an appropriate socket and, possibly, fitting a link. Refer to the documentation accompanying your ROM board for details.

When your PROSPELL ROM is installed, switch on the machine. The ROM should announce itself by displaying its name and copyright message.

If the message does not appear check that you have not chosen a ROM select number already occupied by something else.

2.   Disc version

To load the disc version insert the PROSPELL disc and type RUN"DISC. The program will be loaded and then work exactly as the ROM version (except that you have less memory available for text etc.). The disc version may be upgraded to the ROM version - contact WACCO for details. The advantages of ROM software are that the programs are always available for instant use, and that the full memory is available for you to use.

If you also have the disc version of PROTEXT and you wish to use PROTEXT and PROSPELL together, first load PROTEXT, use "Q" to return to BASIC and then load PROSPELL as described above. It will not work the other way round. Note that the amount of memory available for text will be reduced substantially if both programs are loaded together.

WARNING: Load PROSPELL before entering any text. If you load PROSPELL when there is text in memory the text will be lost.

3. THE DICTIONARY DISC

IMPORTANT - The dictionary disc MUST be copied before using. Do not use the original, retain this as a backup.

Please note that the dictionary disc is subject to copyright laws, and you are expressly permitted to make as many copies as you require, but only for your own use with the PROSPELL program.

If you have bought the ROM version of PROSPELL, the dictionary disc will be included. If you have the disc version the dictionary is on the other side of the program disc. Copy this immediately onto a blank disc, checking first that the write protect tab is pushed down on the original (to avoid any possibility of an accident).

The disc may be copied with any suitable disc copier, such as "|DISCCOPY" in UTOPIA or the CP/M programs "DISCCOPY" (CPC464 and CPC664) or "DISKIT3" (CPC6128). It is advisable to take at least two copies of the disc for added security. When you have copied the disc keep one copy as a backup in case of accident. As you add your own words to the dictionary disc (see later) it is also advisable to take backup copies on a regular basis.

The dictionary fills an entire disc, and it is not possible to corrupt it by accidentally saving files on the disc. It is, of course, possible to corrupt it by copying a whole disc onto it, so be careful!

If the dictionary disc is catalogued the message "0K free" will be given. This does not mean that there is no room on the disc. The dictionary uses a special method of storage and does not use the disc directory in the usual way.

The program disc may not be copied. This is an unfortunate but necessary protection against software piracy. This disc is, however, fully guaranteed and in the event of disc failure it will be replaced by WACCO at the cost of a blank disc.

One or two disc drives?

PROSPEL works with either one or two disc drives. There are 2 or 3 discs that you will be concerned with. The first, unless you have the ROM program, is the program disc. This is only used to load the program when you start. Take the program disc out after the program has loaded.

You then, have the text disc (on which you've saved your files) and the dictionary disc. If you only nave one disc drive then PROSPELL will tell you when to insert each disc, just like when you copy a disc.

If you have two drives the dictionary disc will be in one drive, and the text in the other. They can be either way round, and which choose largely depends which drive you usually put your text disc in. If you put the text disc in drive A, then put the dictionary disc in B. If you prefer to have the text disc in B, then change the currently selected drive with the command '|B'. The dictionary can then be put in A.

To summarise, PROSPELL automatically determines whether you have one or two disc drives, and if you have two drives the text disc should be put in the currently selected drive and the dictionary in the other drive. Which disc should be which is always displayed at the top of tine screen to remind you.

4. USING PROSPELL AS A STAND ALONE PROGRAM

To use PROSPELL type '|SM' (The vertical "|" is obtained by holding down SHIFT and pressing "@"). SM stands for "Spell menu". A menu will appear on the screen giving several options. At this stage we are concerned with the first option, "S".
   PROSPELL will operate in either 80 columns (mode 2) or 40 columns (mode 1). Mode 2 is usually to be preferred because in mode 1 some on screen information has to be abbreviated. To enter the menu and change to mode 2 type: |SM,2.

S: Spell-check file

   This will take a previously saved file off the disc and check it. It is also possible to check a PROTEXT document before you save it - this will be described in the next section.
   Choose a file that you had previously saved on disc to check (you can press "C" to catalogue the disc at this stage).
   Press "S" and you will be asked to type the name of the file.
   If you have text in memory, or a BASIC program, then using the "S" option will erase that. In this case a warning message will be displayed before this occurs and you can press ESC to avoid losing the text or program.

   PROSPELL will then read in the file and check it by comparing words in the file against the dictionary. The words will first be sorted alphabetically. When sorted the words can be checked a great deal faster than would be possible otherwise. The number of words checked so far is displayed as a running count at the bottom of the screen.
   Any word that is not in PROSPELL's dictionary will be listed on the screen with a question mark (?) after it signifying that you should type a letter to choose one of the 5 available options.

The options available we:

S	Store word in dictionary
I	ignore word
C	Change spelling of word
L	Look up correct spelling
V	View context of word

The words listed will generally fall into one of two categories, and the option you choose will depend on this.

1. A word that is incorrectly spelt, whether because you mistyped it or you made a spelling mistake. Press C to correct the word. Part of the text will be displayed with the word highlighted, and then word in question will be displayed with the cursor on the first letter.

The word may now be edited. The following editing functions are available:
?	Move cursor left one character.
?	Move cursor right one character.
CTRL ?	Move to start of word.
CTRL ?	Move to end of word.
CLR	Delete at cursor.
CTRL E	Delete to end of word
CTRL-TAB	Switch between insert and overwrite modes

In addition the cursor keys may be used with SHIFT to move a second cursor about the screen. COPY will copy the character that is under this second cursor into the word being edited.

The text will be re-displayed in its new form, with the new word highlighted. If you press C by mistake, simply press ESC and you will be returned to the select option stage.

Note that it is possible to replace the word by two or more words, but that if this is done only the first word will highlighted and only the first word will be checked.

2. A word that is correctly spelt but is not included in the PROSPELL dictionary. The dictionary contains most commonly used words but there are many other words in the English language. You have two choices here. Press I and the word will be ignored, together with all further occurances of the same word. If the word appeared more than once, the number of times it appeared will be displayed on the screen. Alternatively, you may decide that it's a word you'll be likely to use again and you'd like it to be added to the the dictionary. Press S and that will be done. The most obvious example of words you'd want to add to the dictionary are the words making up your name and address.

The options S,I and C have been mentioned. There are two others, V simply displays the word in context in the same way as C, but without allowing it to be changed. This is often useful if you cannot remember the relevance of a word – particularly an abbreviation.

L is the most interesting option. Suppose a word is brought up on the screen and you're not sure of the correct spelling. Press L and PROSPELL will attempt to find the correct spelling for you. It will search the dictionary and any likely candidates will be listed. If you recognise the correct word you can then type C and change the word.

This is by no means guaranteed to find the correct spelling, indeed the word may not even be in the dictionary, but in many cases the intended word will be found.

Note that the look up option does not work instantly, as it has to search the dictionary for similar words. Also the correct word may be found and yet the search will continue because PROSPELL has no way of knowing that the word found was correct. In many cases several possible words will be listed. If however you see that the correct word has been listed you can stop the search by pressing ESC twice.

At the end of the checking operation

If you have changed any words the file will be automatically saved with the corrections. The old version will remain on the disc with the suffix changed to "BAK" so if you later realise that you've made a mistake you can recover the original file.

If any word has changed length, this may have disrupted any right justification of the text. The text will need to be re-formatted, so a warning message is displayed to remind you of this. PROTEXT users can easily re-format the entire text with the command "FORMAT". Users of other word processors may have a similar command, or may have to re-format the individual paragraphs that have been changed.

The file will not be saved if no changes have been made, unless the file is too large to be checked in one go (see below).

A number of statistics will be displayed after PROSPELL has completed the checking. These are:

1.   The total number of words that were checked. Note that this may be slightly different to the number given by "COUNT" in PROTEXT, because PROSPELL ignores single letters, numbers, etc.
2.   The number of unrecognised words.
3.   The number of words added to the dictionary.
4.   The number of alterations that were made.

Large files

 PROSPELL is capable of handling any size file, but large files may not fit into the memory in one go. In these cases the file will be checked in two or more sections. When the first section has been checked the text will be saved and the next section loaded in.

Note that if a word appears in two sections of a file it will be listed twice, even if you press "I" the first time. The unrecognised words count will therefore count the word twice in this case.

Bypassing the menu

A file may be checked directly without calling up the menu. Enter the command: "|SPELL". Suppose you want to check a file called "REPORT1". This can be done from PROTEXT command mode by typing:

        SPELL REPORT1

It can also be used from BASIC (on the CPC664 and CPC 6128 only) by:

        |SPELL,"REPORT1"

On the CPC464 the following is necessary:

        A$ = "REPORT1":|SPELL,@A$

5. USING PROSPELL FROM WITHIN PROTEXT

Users of other word processors should skip this section
Disc users should load PROSPELL and PROTEXT (PROTEXT first).

First choose the document that you wish to check and load it into PROTEXT in the usual way Alternatively, type in a new document.

Press ESC to go into command mode, and type SPELL. PROSPELL will immediately start to check the text that is in memory.

This works in exactly the same way as the "S" option described above, except that no loading or saving is carried out. If you change a word you will need to save the text from PROTEXT in the usual way.

One further statistic is provided by this command, the number of different words used in the text.

Very long documents cannot be checked in this way, because PROSPELL needs some memory to operate. In practice this is likely to mean files occupying over 80% of the available memory may be too large. A message will be displayed to this effect and you will have to save the file first and check it from the disc

Checking a block of text

You can check a section of text by defining a block in the usual way in PROTEXT, and typing the command "SPELLB" from command mode.

Summary of command "SPELL":

SPELL	or	|SPELL	checks the current text
SPELLB	or	|SPELLB	checks the current block
SPELL file	or	|SPELL,"file"	checks the named file

6. OTHER OPTIONS

A few general remarks

Virtually all the PROSPELL options may be stopped at any time by pressing the ESC key. Pressing the key once pauses the program, at which point you can press ESC a second time to stop it completely, or any other key to resume.

Dictionaries are identified by name, and the name of the dictionary currently being used is always displayed at the top of the screen.

The dictionary should be inserted in the drive indicated at the top of the screen after the word " Dictionary".

T: Two pass Spelling

This option is an alternative to "S", and is often more convenient, especially with long files. On the first pass PROSPELL will compile a list of all unrecognised words, listing them on the screen but not stopping at each one. On the second pass these words are displayed one at a time, and you can Store, Ignore, Change, Lookup or View, as before. The advantage being that you do not need to watch the screen for the whole time.

Multiple dictionaries: For specialised or technical uses you may have a need to use different dictionaries. The two pass check allows the text to be checked against any number of dictionaries in turn. Only the words not found in any of the previous dictionaries are checked in the next. At the end of the first pass the question "Another dictionary (y/n)" is displayed. Type Y and you will be asked to insert the new dictionary, see a later section for how to create your own dictionary.

P: Printer on/off

Press "P" and you will see the display at the top right of the screen change to "Printer on". Press it again and it will revert to "Printer off". When "Printer on" is showing most of the commands will produce printed output. When used with "S" a complete record of the unrecognised words and your responses will be printed. The two pass check is particulary useful when used with a printer; the words are printed on the first pass so you get a list of the unrecognised words printed in 4 columns, enabling you to verify the spellings, before correcting them on the second pass.

C: Catalogue files

This option simply catalogues the files on the text disc, allowing you to see the names of the files for checking.

B: Erase backup files

The spelling check options will give a "Disc full" error if there is insufficient room to re-save the file. This can usually be cured by erasing all the backup files on the disc.

U: Dictionary Utilities

Pressing ''u" selects a second menu. This lists various options generally concerned with the dictionary rather than spell checking itself.

|: External commands

This option, which is available from either menu, allows the use of any external commands. This includes commands provided by background ROMs such as AMSDOS and UTOPIA, as well as commands provided by resident system extensions (RSXs). For PROTEXT users, this works in the same way as entering external commands from PROTEXT command mode.

When the vertical bar "|" is pressed, the screen clears and the cursor is placed after a bar ready for a command. If you type another bar it will be ignored. This allows the function keys defined by UTOPIA to be used.

Parameters of the commands may be entered in completely free format, which is much easier than entering the same commands from BASIC. This means that parameters need not be separated by commas and string parameters need not be enclosed in quotes (but if you type the commas and quotes it will still work). The exceptions are string parameters which start with a number, or include a space, comma or equals sign - these must be enclosed in quotes. Any number of numeric parameters may be used, the number of string parameters is limited to 6 (further string parameters will be ignored). Numeric parameters may be entered in hexadecimal by prefixing the number with "&".

Examples of external commands.

ERA oldtext   … erase file called "oldtext"
REN newname oldname   … rename file "oldname" to "newname"
SPELL   … spell check the text in memory

7. DICTIONARY UTILITIES

E: Edit dictionary

   The dictionary editor operates in a very simple way, and is provided to allow you to correct any errors in your dictionary - for example if you accidentally store a misspelt word. After pressing "E" you are asked to enter a word, and you will be told if the word is in the dictionary or not. If it is, you can delete it by pressing "D". If not, you can store by pressing "S". In either case, pressing any other key will leave the dictionary unchanged.
   When you've finished editing, press ESC to return to the menu.

F: Find words

   You are asked to enter a word pattern, and PROSPELL will search the dictionary and list words matching that pattern. A word pattern can consist of letters, apostrophes and two special "wildcard" characters.

   ?   stands for a single unknown letter
   *   stands for any number of unknown letters (can be zero). One one "*" may be used in a word pattern.

This is best explained by examples:

Word pattern	Words listed
BA???	5 letter words starting with "BA".
A?A?U?	6 letter words with "A" in the first and third position and "U" in the fifth position.
BA*	All words starting with "BA" (any length).
S*K	Words starting with "S" and ending with "K".
*ALE	Words ending with "ALE".
????????????	12 letter words.
*	All words in the dictionary.

A: Anagrams

This is very similar to find words in use. It will look for and list all anagrams of the letters you type as the word pattern. Again wildcards can be used.

Examples:

Word pattern	Words listed
NAME	Anagrams of "NAME" e.g. "AMEN", "MANE", "NAME"
NAME?	Words containing the letters "N", "A", "M", "E" and one other. e.g. "NAMED", "MEANS"
ll????	6 letter words containing two ls
KK*	Words containing 2 Ks (any length)
??????????*	Words of 10 or more letters

L: List dictionary

This simply lists the words in the dictionary to the screen (and printer if selected) starting at any point. You can enter a word at which to start listing. Note that due to the method of storage of the dictionary the listing will usually start a little before the word you entered. Note also that although the dictionary is supplied with the words in alphabetical order, words that you add will not appear in their strictly correct alphabetical place, but a little further on. This does not affect the operation of PROSPELL in any way.

Creating your own dictionaries

The following four commands are mainly useful if you want to create your own dictionaries.

I: Initialise dictionary

This will turn a blank disc into a formatted directory disc, with no words on it. When the disc has been initialised you can enter a name for the dictionary (which might reflect the particular use or the name of the person using it). This name is displayed whenever the dictionary is accessed by PROSPELL, so you always know which dictionary you are using.

N: Name dictionary

This option allows the dictionary name to be changed at any time. The old name will be displayed and you will be asked to enter the new name. You can press ESC to change your mind and leave the name as it is.

W: Count Words in dictionary

The number of words stored on the dictionary is counted, and a running total is updated as it does it. The total number of words will be displayed together with an indication of the percentage of the disc already used. It should be noted that this "Disc usage" figure does not accurately indicate the number of extra words that can be added. The method of dictionary storage allows many extra words to be added without using any more space, if the words are similar to words already present.

B: Build dictionary

(j) Directly onto the dictionary disc

   This is similar to the spelling check options, but it does not stop at each word. You enter the name of a file containing a list of words and each word will be stored in the dictionary. This is designed to be used to build up a dictionary from lists of words that are already known to be correct. Any words already in the dictionary will not be stored a second time.
   A point worth mentioning here is that if the words being added are already sorted PROSPELL's sorting phase will take significantly longer. This apparent paradox is a consequence of the sorting algorithm used, but since documents are virtually never in alphabetical order this is not a limitation in practice.
One useful way to use this option is by selecting "Printer on" so that the list of words is printed. One can then check the printout and use "Edit dictionary" to remove the words not required. This may sometimes be quicker than using the spell check option and storing the words individually

(ii) To a file on disc (Two drive system only)

   This option requires two drives since the words are checked against the dictionary disc and written out to a file on the text disc. If you have two disc drives connected, the "B" option will ask you "Dictionary or File?". Press "D" to store the words directly on the dictionary disc or "F" to send them to a file. The first filename you enter (the "text file") is the file of words to be checked. The second (the "output file") is the file in which the unrecognised words will be stored.
   This command offers possibilities for creating a sorted list of all the different words used in a document, if used with an empty dictionary disc.

Using PROSPELL with other word processors

 Most word processors produce ASCII files. PROSPELL will work correctly with any such file. In some cases it may be necessary to use a different command to the normal save command to tell your word processor to create an ASCII file. This is not the case with most word processors currently available though.

PROSPELL has a command to cater specifically for files produced by Wordstar type word processors. The option "D" must be selected first to change the document type. A letter "W" will appear on the status line to indicate Wordstar type files. The spelling check commands will then work correctly for these files.

8. APPENDIX

A note on how PROSPELL decides what is a word

A word is any group of characters starting with a letter, and containing letters and possibly apostrophes. There are additionally a few special cases as follows:

Single letters: these are always ignored, and so the words "a" and "i" are not stored in the dictionary. This means that where letters are used to label a list of items they will not be listed as an error. For the same reason the Roman numerals up to xii (12) are contained in the dictionary.

Hyphens: hyphenated words are treated as two words

Soft hyphens (PROTEXT files only): a soft hyphen within a word is ignored and the word treated as a single word. It a word containing a soft hyphen is changed the soft hyphen will be lost, and if the word had previously been split at the soft hyphen the two lines will be joined together.

Possessives: words ending with an apostrophe followed by s ("'s") are checked up to the letter before the apostrophe, that is the possessive ending is ignored. Single apostrophes at the end of a word are also ignored.

Words containing numbers: if the word starts with a number then the whole word is ignored. This means that, for example, dates such as "17th" are not listed as an error. If a word starts with two or more letters and is followed by numbers, then just the numbers are ignored. For example "CPC6128" is checked as "CPC" (which is in the dictionary).