

**csH-reference**

COLLABORATORS

	TITLE : csH-reference		
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# Chapter 1

## ssh-reference

### 1.1 C-Shell documentation

C-SHELL 5.20+ REFERENCE, Copyright 1991-1993 by the authors.

Commands  
Variables  
Functions

### 1.2 abortline

ABORTLINE

Usage : abortline  
Example : echo a;abort;echo b  
Results : a

Causes the rest of the line to be aborted. Intended for use in conjunction with exception handling.

### 1.3 action

ACTION

Usage : action [-a] actionname file [arguments]  
Example : action extr csh515.lzh csh.doc

Sends an action to a file. See chapter XIV CLASSES

Options:  
-a (abort) returns 0 if failed and 1 if successful. Otherwise,  
normal error codes (10 or 11) are returned

## 1.4 addbuffers

ADDBUFFERS

Usage : addbuffers drive  
         addbuffers drive buffers [drive buffers ...]  
 Example : addbuffers df0: 24

Just like AmigaDOS addbuffers command, causes new buffers to be allocated for disk I/O. Each buffer costs 512 bytes of memory, CHIP memory if a disk drive. Buffers may be negative (to remove buffers from a drive).

To show actual amount of buffers use "addbuffers drive"  
 or "addbuffers drive 0".

## 1.5 addpart

ADDPART (or TACKON)

Equivalent to TACKON.

## 1.6 alias

ALIAS

Usage : alias [name [command string] ]  
 Example : alias vt "echo Starting VT100;run sys:tools/vt100"

Sets a name to be a string. You can alias a single name to a set of commands if you enclose them in quotes as above. By simply typing vt, the command line above would be executed. Aliases may call each other, but direct recursion is prohibited, so the following works: alias ls "ls -s"  
 To prevent alias replacement, enter: \ls

By typing "alias name", you will get the alias for that name, while with "alias" you get a list of all alias.

ARGUMENT PASSING TO AN ALIAS:

Usage : alias name "%var[%var...] [ command\_string ]"  
         alias name "\*var[%var...] [ command\_string ]"  
 Example : alias xx "%q%w echo hi \$q, you look \$w"  
           xx Steve great today  
 Results : hi Steve, you look great today

The second form of the alias command allows passing of arguments to any position within the command string via use of a variable name. To pass arguments to the end of a command string this method

is actually not necessary. These variables are local, so they don't destroy another variable with the same name.

If you specify multiple arguments, every argument will be assigned one word, and the last argument will be assigned the rest of the command line.

Using a '\*' instead of the first '%' prevents wild card expansion:

```
alias zoo "*a zoo $a
```

To expand the wild cards after you got them, use

```
exec set a $a
```

IMPLICIT ALIASES:

Usage : {command;command}

```
{%var command;command} arg arg
```

Example : {%tmp echo \$tmp \$tmp} hello --> hello hello

Curly braces define temporary aliases. They can be redirected as a whole, can have arguments and local variables. They count as one argument, even if there are blanks inside (as with quotes), and they may be nested. Complex alias definitions can use the braces instead of quotes, although this will add some calling overhead. The closing curly brace is optional if at the end of line.

Example:

```
alias assert {e "Are you sure? ";input -s sure
```

## 1.7 ascii

ASCII

Usage : ascii [-ho]

```
ascii [-ho] string
```

If called without arguments, ascii outputs a complete ASCII table. Given a string, shows each character in ASCII.

Options:

```
-h shows numbers in hexadecimal
```

```
-o shows numbers in octal
```

## 1.8 assign

ASSIGN

Usage : assign

```
assign logical
```

```
assign [-adlnp] logical1 physical1 [log2 phy2 ... ]
```

The first form shows all assigns.

---

The second form kills one assign.  
 The third form assigns logical1 to physical1 and so on.

Options:

- a adds a new path to an existing assign
- d creates a deferred (late-binding) assign  
 (identical with old option -l)
- p creates a path (non-binding) assign  
 (identical with old option -n)

For definition of add/defer/path, refer to your AmigaDOS manual.

## 1.9 basename

BASENAME

Usage : basename var path [path ...]

Example : basename x df0:c/Dir # sets x to "Dir"

Sets var specified to basenames of paths.

## 1.10 cat

CAT (or TYPE)

Usage : cat [-n] [file file....]

Example : cat foo.txt

Type the specified files onto the screen. If no file is specified, STDIN is used (note: ^\ is EOF). CAT is meant to output text files only.

Options:

- n output numbered lines.

## 1.11 cd

CD

Usage : cd [path]

cd -g device1 [device2 [device3 ...]]

Options:

- g generate a list of all directories on the given devices.

Change your current working directory. You may specify '..' to go

back one directory (this is a CD specific feature, and does not work with normal path specifications).

In most cases, you won't have to use the CD command. Just type the desired directory at the prompt (very handy in conjunction with file name completion). Typing a ~ alone on a command line cd's to previous current directory.

There are two situations left when you still need it:

Entering 'cd \*tem' will cd to the first name matched.

The second form generates a list (an ASCII file) of all directories on the given devices. It will be stored in the file given in \$\_qcd (default: 'csh:csh-qcd'). Note that this ASCII file will not be merged but overwritten. Once you have generated this file, you can cd to any directory on your harddisk(s) even if it's not in the current directory.

If you have two directories of the same name and you use one of them more, move the more important one to the beginning of the qcd file. You might also sort the file.

It is legal to type just an abbreviation of the directory name you want to cd to. No asterisk '\*' necessary. If you end up in the wrong directory, cd to the same directory again (best done by Cursor-Up + RETURN). You will cycle through all directories that matched the given abbreviation. The other possibility is to specify the full name of the parent directory: cd devs/keym  
You may also add devices and assigns, so if 'PageStream:' is one line in the qcd-file, a cd to 'page' is successful.

CD without any arguments displays the path of the directory you are currently in.

## 1.12 chgrp

CHGRP

Usage : chgrp group file1 ... fileN

Example : chgrp 42 myfile

Set group-id (0-65535) or group-name of specified files.  
(currently, name-to-id mapping is not implemented)

## 1.13 chmod

CHMOD

Usage : chmod [u|g|o|a][+|-|=][flags] file1 ... fileN

Example : chmod u+rwe myfile

---

Set AmigaDOS file protection flags for the file specified.  
Valid flags are h, s, p, a, r, w, e, d. (x is the same as e)

Ownership:

- u Set specified bits for User (aka Owner)
- g Set specified bits for Group
- o Set specified bits for Other (not User, not Group)
- a all, alias for "ugo" (User/Group/Other)

Specifying no ownership is equal to 'u'.

Modes:

- + Set specified bits, leave all others
- Clear specified bits, leave all others
- = Set specified bits, clear all others

Specifying no mode is equal to '='.

Archive bit cleared by default!

Note: This command is equivalent to "protect" except that the arguments for filename(s) and flag(s) are reversed.

## 1.14 chown

CHOWN

Usage : chown owner file1 ... fileN

Example : chown 42 myfile

Set owner-id (0-65535) or owner-name of specified files.  
(currently, name-to-id mapping is not implemented)

## 1.15 class

CLASS

Usage : [-n] name {type=param} [ "actions" {action=command} ]

Example : class zoo offs=20,dca7c4fd ext=.zoo actions view="zoo l"

Defines a new class of files and the actions to be taken on them in various cases, or shows old definitions if given no arguments.  
See section XIV: OBJECTS

Options:

- n (new) forgets old definitions

## 1.16 close

CLOSE

Usage : close [filenumber]

Close the specified file opened by open. Without filenumber, closes all open files. See open and flist for more info.

## 1.17 cls

CLS

Usage : cls

This is an alias. It only clears the screen, but also works on a terminal (echo ^L doesn't).

## 1.18 copy

COPY (or CP)

Usage : copy [-udfpmo] file file  
 or : copy [-udfpmo] file1 file2...fileN dir  
 or : copy [-rudfpo] dir1...dirN file1...fileN dir

Options :

- r recursive, copy all subdirectories as well.
- u update, if newer version exists on dest, don't copy
- f freshen, if file doesn't exist on dest or newer, don't copy
- q suppresses 'not newer' and 'not there' messages in -u and -f
- d don't set destination file date to that of source.
- p don't set destination protection bits to those of source.
- m erases the original. does not work with -r
- o overwrites write/delete-protected, reads read-protected
- a don't clear archive bit

Example : copy -r df0: df1:

Copy files or directories. When copying directories, the -r option must be specified to copy subdirectories as well. Otherwise, only top level files in the source directory are copied.

All files will be displayed as they are copied and directory's displayed as they are created. This output can be suppressed by redirecting to nil: eg. copy -r >nil: df0: df1:

Copy will abort after current file on Control-C.

Copy by default sets the date of the destination file to that of

the source file. To override this feature use the `-d` switch.

Similarly, it sets protection bits (flags) to those of source and any file comment will be copied. To avoid this use `-p`. The archive bit is always cleared by default (use option `-a` to leave it untouched).

Another useful option is the `-u` (update) mode where copy will not copy any files which exists already in the destination directory if the destination file is newer or equal to the source file. This is useful when developing code say in ram: eg. 'copy \*.c ram:' when done you can copy `-u ram: df1:` and only those modules you have modified will be copied back.

Copy command will now create the destination directory if it does not exist when specified as 'copy `[-r]` dir dir'. If you specify copy file file file dir, then 'dir' must already exist.

## 1.19 cp

CP (or COPY)

Equivalent to COPY.

## 1.20 date

DATE

Usage : date `[-bsr]` [new date and/or time]

Example : date Wednesday # this refers to NEXT wed, of course

Options:

- `-b` print date/time from the battery clock, if existent
- `-s` stores the current time internally
- `-r` shows time relative to last stored in secs and hundredths

Used to read or set system date and/or time. All standard options may be used (yesterday, tomorrow, monday, etc.).

Leading zero's are not necessary.

Without parameters shows Dddddd DD-MMM-YY HH:MM:SS.

## 1.21 dec

DEC

Usage : dec varname [value]

Example : dec abc

Decrement the numerical equivalent of the variable with specified value (default: 1) and place the ASCII-string result back into that variable.

## 1.22 delete

DELETE (or RM)

Usage : delete [-fpqrv] file file file...

Example : delete foo.txt test.c

Remove (delete) the specified files. Remove always returns errorcode 0. You can remove empty directories.

Options:

- r recursively remove non-empty directories.
- p (or f); remove delete-protected files.
- v toggle verbose output. Useful if 'delete' is aliased.
- q (quit), delete aborts if the file to be removed didn't exist or couldn't be deleted. This does not affect non-matching wildcards.

If you specify any wildcard deletes the files will be listed as they are deleted. This can be suppressed by redirecting to nil:

## 1.23 dir

DIR (or LS)

Usage : dir [-abcdfhiklnogstuv] [-z lformat] [path path ... ]

Example : dir -ts downloads:

```
dir -lz "%7s %-.16n %m" *.c
```

Options:

- d list directories only
- f list files only
- h list only files which not start with a dot, end with '.info' or have the h-flag set. Adds an 'i' bit to the flags which tells if an according .info file exists.
- s short multi(4) column display.
- c don't change colors for directories
- q quiet display. does not show length in blocks
- o display file nOtes
- n display names only
- p display full path names and suppress directory titles
- a shows the age of all files in the format days hours:minutes
- i identifies every file, shows the type instead of the date.  
See chapter XIV CLASSES
- v (viewdir) recursively sums up lengths of the files in a dir
- l sorts the files by their length, longest first.

- t sorts the files by their time, most recent first.
- k sorts the files by their class (klass)
- b sorts the files backwards.
- g prints directories at the beGinning
- e prints directories at the End
- u must be given exactly two directories. Shows files only in the first directory, files in both and files in the second.
- z custom format  
(must be followed by an argument which holds the format string)

Displays a directory of specified files. Default output shows date, protection, block size, byte size and total space used. Protections flags include new 1.2/1.3 flags (see under protect), plus a 'c' flag which indicates that this file has a comment. Files are alphabetically sorted, without case sensitivity, and directories are in red pen (unless you use -c). Dir takes in account the width of your window.

The lformat string (option -z) is used to create your own directory format. Instead of the "-z lformat" command line argument you can set the variable "\_dirformat" (which automatically replaces the internal default output format, if set).

Thus, "\_dirformat" overwrites the internal output format and "-z lformat" overwrites "\_dirformat" (and of course the internal).

Your custom format may contain the following codes:

%a age	%l LF if comment	%t time
%b size in blocks	%m multi column	%u size in K
%c flag c (comment)	%n name	%v dir size in eng.
%d date	%o filenote (comment)	%w dir size in K
%e flag i (.info)	%p name w/ path	%x translated date
%f flags "hsparwed"	%q name w/ slash	%+ flag i as '+' or ' '
%i flag d (dIr)	%r size in eng.	
%k class	%s size	

- %I link information (S: softlink, H: hardlink, P: pipe, -: else)
- %L name of original file if link (empty otherwise)
- %N name + original name (of link)
- %F protection bits (flags "rwed") for group/other
- %U user-id
- %G group-id

Between the '%' and the identifying letter, there may be an optional field width. If the number is preceded by a '-', the field contents will be left adjusted. If by a dot, the contents will be cut down to match the field width if they are longer.

If the format string contains a %m, cshell will try to print more than one entry on one line. The column width is the field width of the %m entry. If omitted, it's assumed to be the one of the first file. If a file is longer, it will use two columns.

If you prefer the old output-style of this command (5.19 and before) add the following line to your .cshrc file:

```
set _dirformat "    %-24n %c%f %7s %4b %d %t"
```

## 1.24 diskchange

DISKCHANGE

Usage : diskchange drive...drive

Like AmigaDOS diskchange. Multiple drive names are allowed.

## 1.25 echo

ECHO

Usage : echo [-en] string

Example : echo hi there

Results : hi there

Options:

-n don't append newline.

-e echo to stderr.

Echo the given string.

## 1.26 else

ELSE

Usage : else ; command

Usage : if -f foo.c ; else ; echo "Not there" ; endif

Else clause, must follow an IF statement.

## 1.27 endif

ENDIF

Usage : endif

The end of an if statement.

Note: if you return from a script file with unterminated IF's and the last IF was false, prompt will be changed to an underscore ('\_') and no commands will be executed until 'endif' is typed.

## 1.28 error

ERROR

Usage : error n

Generates return code n.

## 1.29 exec

EXEC

Usage : exec [-i] command [args]

Example : set cmdline "dir ram:"

exec \$cmdline # would not work without exec

Options:

-i return code 0.

Execute the command specified; exec command is equivalent to command, only you can use variables to specify command name.

Note that the command line is parsed TWICE! Examples:

set a dir ram;; exec \$a # right

set a mkdir; exec \$a "My directory" # wrong! creates 2 directories

Exec returns the return code of the command executed unless option -i (ignore) is set, in which case always 0 is returned.

## 1.30 fault

FAULT

Usage : fault error1 .. errorN

Example : fault 205 212

Like AmigaDOS fault, prints specified error messages.

## 1.31 filenote

FILENOTE

Usage : filenote file1 .. fileN note

filenote -s file1...fileN

Options:

-s (second form) ; displays the file notes of the given files.

The first form sets AmigaDOS comment of the specified file.

## 1.32 flist

FLIST

Usage : flist

Lists the filenumbers of files opened by open.  
See open and close for more info.

## 1.33 fltlower

FLTLOWER

Usage : fltlower

Example : dir | fltlower

Or : fltlower <readme

This is a filter command, i.e. it reads from stdin and writes to stdout. The more natural way to use it is a pipe, or it can be redirected.

Its purpose is to convert all alphabetic to lower case.

## 1.34 fltupper

FLTUPPER

The same of fltlower, only this converts to upper case.

## 1.35 foreach

FOREACH

Usage : foreach [-v] varname ( strings ) command

Example : foreach i ( a b c d ) "echo -n \$i;echo \" ha\""

Result : a ha

b ha

c ha

d ha

Options:

-v display arguments every time command is executed.

'strings' is broken up into arguments. Each argument is placed in the local variable 'varname' in turn and 'command' executed. Put the command(s) in quotes.

Foreach is especially useful when interpreting passed arguments in an alias.

eg.

```
foreach i ( *.pic ) viewilbm $i
assuming a.pic and b.pic in current directory the following commands
will occur:
viewilbm a.pic
viewilbm b.pic
```

All 'for...' commands can be interrupted using CTRL-D or CTRL-E.

## 1.36 forever

FOREVER

Usage : forever command  
or : forever "command;command;command..."

The specified commands are executed over and over again forever.

Execution stops if you hit ^C or ^D, or if the commands return with an error code.

## 1.37 forline

FORLINE

Usage : forline var filename command  
or : forline var filename "command;command..."  
Example : forline i RAM:temp "echo line \$\_linenum=\$i"

For each ASCII line of file specified commands are executed and var points to line content. You can check system variable \_linenum to find the number of the line currently read. If STDIN (case sensitive) is specified as input file, the lines are read from standard input.

## 1.38 fornum

## FORNUM

Usage : fornum [-v] var n1 n2 command  
 or : fornum [-v] -s var n1 n2 step command

Example : fornum -v x 1 10 echo \$x  
 or : fornum -s x 10 1 -1 echo \$x # counts backwards

Executes command(s) for all numerical values of x between n1 and n2. If more than one command is specified, or command is redirected, include command(s) in quotes.

### Options:

- v (verbose) causes printing of progressive numbers.
- s specify a step; if negative, the count will be backwards.

## 1.39 getenv

### GETENV

Usage : getenv [shellvar] envvar

Gets the value of an ENV: variable and stores it in the shell variable 'shellvar'. If shellvar is omitted, the value of the ENV: variable is printed to stdout.  
 This command is obsolete since ENV: variables can be retrieved by writing \$envvar anywhere on the command line.

## 1.40 goto

### GOTO

Usage : goto label

Example :

```
label start
echo "At start"
dir ram:
goto start
```

Goto the specified label name. You can only use this command from a source file. Labels may be forward or reverse from current position. It is legal to jump out of if's.

## 1.41 head

## HEAD

Usage : head [filename] [num]

Example : head readme 20

Display first "num" lines of "filename". If num is not specified, 10 is assumed. If filename is not specified, standard input (stdin) is taken instead.

## 1.42 help

### HELP

Usage : help [-f]

Example : help

Options :

-f list functions also

Simply displays all the available commands. The commands are displayed in search-order. That is, if you give a partial name the first command that matches that name in this list is the one executed. Generally, you should specify enough of a command so that it is completely unique.

## 1.43 history

### HISTORY

Usage : history [-nr] [partial\_string]

Example : history

Options :

-n omits line numbering

-r reads history from stdin

Displays the enumerated history list. The size of the list is controlled by the `_history` variable. If you specify a partial string, only those entries matching that string are displayed.

## 1.44 howmany

### HOWMANY

Usage : howmany

This command tells you how many instances of Shell are running in your system.

## 1.45 htype

HTYPE

Usage : htype [-r] [file1..fileN]

Options:

-r display all files in a directory.

Displays the specified files in hex and ASCII, just like the system command 'Type file opt h'. Especially suitable for binary files.

If there are no filenames specified, standard input is used, so you can use htype as the destination for a pipe.

## 1.46 if

IF

Usage : if [-n] argument conditional argument [then]

or : if [-n] argument

or : if [-n] -f file or -e file

or : if [-n] -d file/dir

or : if [-n] -m

or : if [-n] -t file file1 .. fileN

or : if [-n] -r rpnexpression

or : if [-n] -v varname

or : if [-n] -o char arg ... arg

Options:

-n (NOT) reverses the result.

-d tests the type of the object specified: if it is a directory, then TRUE; if it is a file (or it doesn't exist) then FALSE.

-f (or -e) checks for existence of the specified file.

-m test if FAST memory is present.

-o tests for option 'char' in the rest of the arguments.

-r evaluates a given RPN expression (see under RPN for more info).  
If value on top of stack is 0, then FALSE, else TRUE.

-t compare the date and time of the first file with all the others;  
if the first is younger than ALL the others, then FALSE,  
else TRUE. If a file doesn't exist, it is considered as  
being older.

-v test if a given variable is defined.

Makes the following instructions up to the next endif conditional.

The 'then' is optional. The if clause must be followed by a semi-colon if instructions follow on the same line.

If a single argument is something to another argument. Conditional clauses allowed:

<, >, =, ! and combinations. Thus != is not-equal, >= larger or equal, etc...

If arguments are not numeric, they are compared as strings.

Usually the argument is either a constant or a variable (\$varname).

The second form if IF is conditional on the existence of the argument. If the argument is a "" string, then FALSE, else TRUE.

The third form of IF used by -f switch checks for existence of the specified file. -e is the same as -f

Option -m is used to test if FAST memory is present.

Example (to be included in a login.sh file):

```
if -m; resident -d lc1 lc2 blink; endif
```

Using -t form compares the date and time of the first file with all the others; if the first is younger than ALL the others, then FALSE, else TRUE. If a file doesn't exists, it is considered as being older.

This feature is especially useful for building makefiles without using any MAKE utility.

Example:

```
if -t test.o test.asm test.i ; asm -o test.o test.asm ; endif
```

Option -o tests for option 'char' in the rest of the arguments.

Example: if -o r -rp ram:comm1.c will yield TRUE.

When using 'IF' command interactively if you are entering commands following an 'IF' that was false, the prompt will be set to a underscore '\_' to indicate all commands will be ignored until an 'ELSE' or 'ENDIF' command is seen.

## 1.47 inc

INC

Usage : inc varname [value]

Example : inc abc 5

Increment the numerical equivalent of the variable with specified value (default: 1) and place the ASCII-string result back into that variable.

## 1.48 info

INFO

Usage : info [-pt] [path1 path2 ... pathN]

Options :

- p only display drives with readable (present) disks
- t print disk/fs type and bytes used instead of block sizes

If called without arguments, info gives you the drive information on all devices. If one or more paths are specified, only information on those drives will be displayed.

Note: Cshell does (correct) rounding for all displayed values, Commodore's Info command does not. So values may slightly change.

## 1.49 input

INPUT

Usage : input [-sr] var var ... var

Example : input abc

Options :

- s the whole line is read in as one word, including spaces.
- r puts the console to single character mode before reading, ie. does not wait for RETURN to be pressed). Use with care.

Input from STDIN (or a redirection, or a pipe) to a variable. The next input line is broken up in words (unless quoted) and placed in the variable.

## 1.50 join

JOIN

Usage : join [-r] file1..fileN destfile

Example : join part1 part2 part3 total

Options :

- r overwrite any existent destfile.

Joins (concatenates) the specified files to get destfile. Join will refuse to overwrite an existing destfile, unless the 'r' option is used.

## 1.51 keymap

KEYMAP

Usage : keymap [number {key=function}]

Example : keymap 0 1030=4 1032=12

Defines one keymap for the csH command line editing. See chapter XV.

## 1.52 label

LABEL

Usage : label name

Create a program label right here. Used in source files, you can then GOTO a label.

## 1.53 linecnt

LINECNT

Another filter. Counts the number of lines of its stdin and writes it to stdout.

## 1.54 ln

LN (or MAKELINK)

Usage : ln [-s] filename [linkname]

Example : ln stuff/data newname

Options :

-s make soft link (default is hard link)

ln creates an additional directory entry, called a link, to a file or directory. Any number of links can be assigned to a file.

filename is the name of the original file or directory.  
linkname is the new name to associate with the file or filename. If linkname is omitted, the last component of filename is used as the name of the link.

A hard link (the default) is a standard directory entry just

like the one made when the file was created. Hard links can only be made to existing files. Hard links cannot be made across file systems (disk partitions, mounted file systems). To remove a file, all hard links to it must be removed, including the name by which it was first created; removing the last hard link releases the inode associated with the file.

A symbolic link, made with the `-s` option, is a special directory entry that points to another named file. Symbolic links can span file systems and point to directories. In fact, you can create a symbolic link that points to a file that is currently absent from the file system; removing the file that it points to does not affect or alter the symbolic link itself.

NOTE: Symbolic links (also known as "soft links") are currently NOT SUPPORTED by AmigaOS. DO NOT USE!

## 1.55 local

LOCAL

Usage: local [var...var]

Creates one or more local variables. Those variables disappear at the end of their alias or source file, and cannot be accessed from inside other aliases or source files.  
With no arguments, shows all top level variables and their values.

## 1.56 ls

LS (or DIR)

Equivalent to DIR.

## 1.57 makelink

MAKELINK (or LN)

Equivalent to LN.

## 1.58 man

## MAN

Usage : man command(s)

Example : man mkdir

Get info about a Shell command, or others keywords. These include all special \_variables, plus various keywords: WILDCARDS, PIPES, EDITING, STARTUP and more.

See special alias manlist to get a list of ALL keywords supported by man.

You must set \_man to the paths of your .doc files:

```
set _man dhl:docs/aliases.doc dhl:docs/csh.doc
```

To create your own .doc files, precede all your keywords by four blanks. 'man' will then display lines until the first character of a line is alphanumeric or has four leading blanks.

## 1.59 md

MD (or MKDIR)

Equivalent to MKDIR.

## 1.60 mem

MEM

Usage : mem [-cfqsl]

Options:

- c shows the free chip mem only
- f shows the free fast mem only
- q outputs just a number without titles
- s stores current free memory
- r shows memory used relative to last stored
- l flushes all unneeded memory

## 1.61 menu

MENU

Usage : menu [-mn] [ title item...item ]

Example : menu Shell JrComm,,j Rename,"rename ",r quit

Options:

- n clear all existing menus.
- m use monospaced font.

Appends one pull down in the current console window. Up to 31 menus with 63 items each (including title) can be installed.

If the item is just a string, that string will be in the menu item. When you select it, it will be put into the prompt and executed.

If there is a comma and after that comma a second string, this will be the command will be inserted at the prompt. This time you have to add the ^M yourself if you want the command to be executed.

If there is a second comma, the letter after that comma will be the keyboard shortcut for that menu item. (This will be case sensitive some day, use lowercase).

If for any reason your current menu is corrupt, just enter an empty 'menu' command.

When the first menu is installed you can use option -m to choose a monospaced font (System Default Font) instead of the default Intuition Font (which may be a proportional font). This is useful for user-formatted menus (like in the example script "menu.sh").

## 1.62 mkdir

MKDIR (or MD)

Usage : mkdir [-p] name name name...  
 Example : mkdir df0:stuff

Options:

- p create all dirs in path if necessary.

Create the specified directories.

If "name" ends with trailing slash it will be stripped off.

mkdir now supports the -p option. mkdir -p followed by a full path name will create all directories necessary to make the path. For example, suppose that the directory ram:foo exists and is empty. "mkdir -p ram:foo/bar/tst/a" would create ram:foo/bar, ram:foo/bar/tst, and ram:foo/bar/tst/a all in one step. In addition, it will issue no error codes for directories it cannot make.

## 1.63 mv

MV (or RENAME)

Equivalent to RENAME.

## 1.64 open

OPEN

Usage : open filename filemode filenumber

Example : open RAM:data w 1

This allows you to open a file, redirect to it as many commands as you like, then close it.

Filename is any valid AmigaDOS filename, filemode is either "r" for read or "w" for write, filenumber is a number between 1 and 10.

To redirect a program to or from an open file, use as your redirection filename a dot followed by the filenumber.

Here is a complete example:

```
open RAM:data w 1
echo -n 2+2= >.1
rpn 2 2 + . CR >.1
close 1
type RAM:data # will display 2+2=4
```

See also close, flist.

## 1.65 path

PATH

Usage : path [-gr] [dir...dir]

Without arguments, lists AmigaDOS path. Otherwise adds given directories to the path, preventing duplicate entries.

Options:

- r Resets the path
- g Global path modifications; operations (add, reset) apply to all CLI processes instead of only the current one

Note:

It's not perfectly "legal" to modify the path-list of other processes. Adding entries (option -g) works fine in most cases. But the removal of entries (options -gr together) may crash the system, because CSH doesn't know about the memory handling of other processes (it doesn't know how they allocated the memory for the path-list entries).

So use option -g always with care (at least together with -r). If it works, it's okay. If not, you lose ;-) There's no 100% reliable way for global path modifications.

## 1.66 pri

PRI

Usage : pri clinumber pri

Example : pri 3 5 # set priority of cli #3 to 5

Change the priority of the specified task (use PS command to determine clinumber). If you specify 0 as clinumber you can change priority of "this" task (the one executing shell).

## 1.67 protect

PROTECT

Usage : protect file1 ... fileN [u|g|o|a][+|-|=][flags]

Example : protect myfile u+rwe

Set AmigaDOS file protection flags for the file specified.

Valid flags are h, s, p, a, r, w, e, d. (x is the same as e)

Ownership:

u Set specified bits for User

g Set specified bits for Group

o Set specified bits for Other (not User, not Group)

a all, alias for "ugo" (User/Group/Other)

Specifying no ownership is equal to 'u'.

Modes:

+ Set specified bits, leave all others

- Clear specified bits, leave all others

= Set specified bits, clear all others

Specifying no mode is equal to '='.

Archive bit cleared by default!

Note: This command is equivalent to "chmod" except that the arguments for filename(s) and flag(s) are reversed.

## 1.68 ps

PS

Usage : ps [-les] [commandname...commandname]

Options:

-l shows full pathnames of commands

-e excludes the given command names from the list

-s don't show stacksize and type, use old output-format instead

Gives status of CLI processes. eg:

Proc	Command	Name	Typ	Stack	Pri.	Address	Directory
* 1	csH		fr	10000	0	97b0	Stuff:shell
2	clock		bw	4096	-10	2101a8	Workdisk:
3	emacs		bw	30000	0	212f58	Stuff:shell
4	VT100		bw	4000	0	227328	Workdisk:

Address is the address of the task, directory is the process currently CD'd directory. My default, only the BaseNames of the commands are shown. Your own CLI will be marked by an asterisk in the first column.

Stack size is the real size of a command's stack. It's not the size a program gets if it's launched by this command. Use "Status" instead if you need the size of the Default Stack. (be aware: "Status" does not show the stack size used by a prog!)

Typ are two letters. The first is either "f" (foreground) or "b" (background). The second is one of:

- i: invalid
- a: added
- r: running / ready to run
- w: waiting
- e: except
- d: removed

## 1.69 pwd

PWD

Usage : pwd

Rebuild cwd by backtracing from your current directory.

## 1.70 qsort

QSORT

Usage : qsort [-cr] <in >out

Options :

- c case-sensitive
- r reverse sort

Quick sorts from stdin to stdout (case-insensitive).

## 1.71 quit

QUIT

Usage : quit

Quit out of Shell back to CLI.

## 1.72 rback

RBACK

Usage : rback command

Start a new process executing the specified command, but can't do input/output. Equivalent to 'run command >NIL: <NIL:'. Instead of using rback, you can add a '&' at the end of the command line.

Note: rback cannot start builtin commands. You have to start a subshell: rback csh -c "copy ram:temp prt;;rm ram:temp"

## 1.73 readfile

READFILE

Usage : readfile varname [filename]

Completely reads an ASCII file and assigns it to a variable. Each line becomes one word in the resulting string. Embedded blanks are no problem. If file name is omitted, stdin is used. See also 'writefile', @subfile and @flines

## 1.74 rehash

REHASH

Usage : rehash [-cglos]

Options :

- c clear local program hash list
- g clear global program hash list
- l load global program hash list into local buffer
- o output local program hash list
- s save local program hash list to disk

Scans the complete DOS search path (see also 'path') and builds a program hash list. This can be used for program name completion from command line (default: ESC-p, ESC-P). And when running commands CShell does not scan DOS search path any more for every command but instead scans the program hash list in memory (minimizes disk access and speeds up running commands significantly).

Of course, when you add a directory to your path, when you add programs to the existing path or when you remove directories/programs then you have to rebuild the program hash list.

Each invocation of CShell has its own local buffer to hold that program hash list. Use option -s to save the local list to disk (csh:csh-prgs). With option -l the list is loaded into memory. The first CShell loading the list puts a copy of it into a global buffer so that next time a CShell wants to load it the global buffer is used and not the disk file.

The global list stays in memory -- even if you quit all CShells. Use option -g to free that global list (if you are low on memory), but this does not affect local lists of any currently running CShell. Option -c clears the local list.

If you run this command without options the scanned list is not only put into local buffer but also in global buffer.

There's no need to clear the local/global list before loading/building a new one. This is done automatically.

The variable \$\_prghash (default: 'csh:csh-prgs') holds the filename where the program hash list is loaded from and saved to.

Programs from the hash list are case in-sensitive and may be abbreviated. This can be toggled with the variable "\_abbrev".

Recommended usage:

First run "rehash" from your shell to build the program hash list. Save this list to disk with "rehash -s". Now include "rehash -l" in "s:.cshrc" to load this list on every invocation of CShell.

## 1.75 relabel

RELABEL

Usage : relabel drive name

Example : relabel DH0: Picard

Change the volume name of the disk in the given drive to the name specified. Volume names are set initially when you format a disk.

If you have a floppy disk system with only one disk drive, be sure to specify the disks by volume name, instead of drive name.

---

## 1.76 rename

RENAME (or MV)

Usage : rename [-fv] from to  
or : rename [-fv] from from from ... from todir

Options :  
-f don't abort on errors  
-v verbose mode (print renamed filenames)

Allows you to rename a file or move it around within a disk.  
Allows you to move 1 or more files into a single directory.  
The archive bit of the file(s) will be cleared.

## 1.77 resident

RESIDENT

Usage : resident [-dr] [files]  
Example : resident lc1 lc2 blink # load these as resident  
resident -d lc1 lc2 blink # defer load when needed  
resident -r lc1 lc2 blink # remove these  
resident # list resident programs

Options :  
-d deferred load;  
-r remove files from resident list

This is DOS resident. Commands are searched by Shell in resident list BEFORE of searching on any external device.  
Only PURE programs can run as resident, see DOS docs for more info.  
Option -d is very useful: you can say, in your startup file, resident -d file...file; programs will not be loaded immediately, but only when you will try to load them. This way, you will not waste memory and startup time if you don't use the programs.  
Old option -a has no more effect.

## 1.78 return

RETURN

Usage : return [n]  
Example : return 10

Exit from a script file, or quit from shell with optional exit code.

## 1.79 rm

RM (or DELETE)

Equivalent to DELETE.

## 1.80 rpN

RPN

Usage : rpN expression

Example : rpN 3 7 \* # Prints the value 21

Evaluate an RPN expression, using 32-bit values. In older versions of Shell RPN contained string functions too, but now that strings are handled by specific commands, these are no more needed. At end of evaluation, RPN prints values on stack, so you can say for instance "rpN \$x 2 \* | input x" to double the value of variable x.

Functions implemented are:

- + - \* / Obvious meaning; / means integer division, of course
- % Module operator e.g. "rpN 7 3 %" answers 1
- & | ~ Bitwise and, or, not operators
- > < == Tests for greater-than, lower-than, equal. To get a test for >= (or <=), you can use < ! (or > !)
- ! Logical not operator
- DUP Duplicate value on top of stack
- DROP Drop value on top of stack
- SWAP Swap two values on top of stack

To avoid confusion with redirections, > and < operators must be enclosed in quotes e.g.

3 2 ">" # Prints 1

## 1.81 run

RUN

Usage : run prgm args

Example : run emacs test.c

Start a new process executing the specified command. This command is not fully reliable: use at your own risk. See also rback.

## 1.82 rxrec

RXREC

Usage : rxrec [portname]

Create an AREXX-compatible port of the specified name (defaults to "rexx\_csh"), then puts Shell to sleep waiting for messages on it.

CAUTION: the only way to exit from this status is to send to the port the message "bye".

Example:

Open two Shell's in two separate CLI's. From the first, type:

```
rxrec
```

Now first Shell doesn't respond to keyboard input; instead, it waits for messages on a port called "rexx\_csh". Now, from the other, type:

```
rxsend rexx_csh "dir df0:"
```

You will see the listing of df0: in the first Shell. Experiment as you like, then:

```
rxsend rexx_csh bye
```

And all will return to normal.

## 1.83 rxsend

RXSEND

Usage : rxsend [-lr] portname command...command

Options :

- r set the variable \_result to the result string of the AREXX command.
- l send the whole line as \*one\* command.

Send commands to any program with an AREXX-compatible port. Be aware that every word is sent as a single command!

You don't have to load anything to use these command (or rxrec): all you need is a program with the right port.

An example is CygnusEdProfessional: here is, for instance, a command to wake it up, load the file test.c and jump to line 20:

```
rxsend rexx_ced cedtofront "open test.c" "jmp to line 20"
# rexx_ced is the name of AREXX port for CygnusEd
```

Refer to your application manual for details and for the names of the commands and the port.

## 1.84 search

SEARCH

Usage : search [-abceflnoqrvw] file...file string

Search specified files for a string. Only lines containing the specified strings are displayed.

If the filename is STDIN (in uppercase), the standard input is used, so you can use search as the destination for a pipe.

Example:

```
strings myprog * | search STDIN .library
```

Lists all libraries used in "myprog".

Search is very fast if none of the options -w, -e and STDIN was specified and the file fits into memory.

Options:

- a (abort) stops search as soon as the pattern was found once
- b (binary) shows only byte offsets instead of lines. If combined with -n, shows naked numbers.
- c (case) turns ON case sensitivity
- e (exclude) lists lines NOT containing the pattern
- f (files) causes only the names of the files in which the pattern was found to be displayed.
- l (left) pattern must be at beginning of line (this is faster than using a wild card)
- n (number) turns off line numbering
- o (only) finds only whole words
- q (quiet) suppresses printing of file names.
- r (recurse) if you specify any directory, all files in that directory are recursively searched.
- v (verbose) shows each file name on a single line. this is automatically turned on if search is redirected
- w (wild) wild card matching. see notes below

Notes to wild card matching;

- Uses Shell standard matching.
- All standard DOS wildcards are allowed \* ? [] () | ~ ' #
- The WHOLE line must match the string, not only a substring.
- String MUST be enclosed in quotes to avoid wildcard expansion

Examples:

```
search -cr df0:include ACCESS
```

Find all occurrences of ACCESS (in uppercase) in all files contained in include directory.

```
search -w shell.h "'#define*"
```

Lists only lines of file beginning with (not simply containing)

#define. Note the use of ' to escape the special symbol #.

## 1.85 set

SET

Usage : set [name] [=] [string]

Example : set abc hello

Set with no args lists all current variable settings.

Set with one arg lists the setting for that particular variable.

Specifying name and string, stores the string into variable name.

Also see the section on special \_variables.

## 1.86 setenv

SETENV

Usage : setenv envvar value

Sets an ENV: variable to the given value. The value must be enclosed in quotes if it contains spaces. To retrieve an ENV: variable, just use \$envvar anywhere on a command line.

## 1.87 sleep

SLEEP

Usage : sleep timeout

Example : sleep 10

Sleep for 'timeout' seconds, or until ^C typed.

## 1.88 split

SPLIT

Usage : split srcvar dstvar...dstvar

Assigns one word of srcvar to every dstvar, the rest of srcvar to the last dstvar.

Note: You enter variable NAMES, not variables.

## 1.89 stack

STACK

Usage : stack [number]

Example : stack [-s] 8000

Options :

-s prints size only (pure number, no text).

Changes the default stack for this CLI.

Without arguments, just prints it.

## 1.90 strhead

STRHEAD

Usage : strhead varname breakchar string

Example : strhead x . foobar.bas # Will set x to "foobar"

Remove everything after and including the breakchar in 'string' and place in variable 'varname'.

## 1.91 strings

STRINGS

Usage : strings [-bnrv] [file1..fileN] [minlength]

Example : strings [-bnrv] c:dir c:list shell 7

Options :

- r if you specify any directory, all files in that directory are recursively searched for strings
- n print name of current file in front of each string
- b shows each string enclosed by '|' characters, so as to expose leading and trailing spaces or tabs.
- v verbose output before each file (filename, minlength)

Prints strings contained in specified files (usually binary) with length >= minlength. Default is 4.

You cannot use a filename that represents a number as last argument. If there are no filenames specified, standard input is used, so you can use strings as the destination for a pipe.

## 1.92 strleft

## STRLEFT

Usage : strleft varname string n

Example : strleft x LongString 5 # Will set x to "LongS"

Place leftmost n chars of string in variable varname.

## 1.93 strlen

### STRLEN

Usage : strlen varname string

Example : strlen x Hello # Will set x to "5"

Puts len of string in variable varname.

## 1.94 strmid

### STRMID

Usage : strmid varname string n1 [n2]

Example : strmid x LongString 5 3 # Will set x to "Str"

Places n2 chars from string, starting at n1, in variable varname.

By omitting n2, you get all chars from n1 to end of string.

## 1.95 strright

### STRRIGHT

Usage : strright varname string n

Example : strright x LongString 5 # Will set x to "tring"

Place rightmost n chars of string in variable varname.

## 1.96 strtail

### STRTAIL

Usage : strtail varname breakchar string

Example : strtail x . foobar.bas # Will set x to "bas"

Remove everything before and including the breakchar in 'string' and place in variable 'varname'.

## 1.97 source

### SOURCE

Usage : source file [arguments]

Example : source mymake.sh all

Result : batch file 'mymake.sh' called with var `_passed` = 'all'

Execute commands from a file. You can create SHELL programs in a file and then execute them with this command. Source'd files have the added advantage that you can have loops in your command files (see GOTO and LABEL). You can pass SOURCE files arguments by specifying arguments after the file name. Arguments are passed via the `_passed` variable (as a single string, a set of words). See `_failat` variable for script aborting.

Long lines may be split by appending a backslash (\) at end of first part. One single line must be shorter than 512 bytes, but the concatenated line can be as long as you want. There is no limit on the length of the concatenated line.

Automatic 'sourcing' is accomplished by appending a .sh suffix to the file (no need to set the s-bit) and executing it as you would a C program:

```
----- file hello.sh -----
foreach i ( $_passed ) "echo yo $i"
-----
```

```
$ hello a b c
yo a
yo b
yo c
```

If the last character of a line in a source file is '{', all following lines will be appended to the current one and separated by semicolons until the last character of a line is '}'. Those blocks may be nested. You may use comments and unterminated strings within.

```
----- file login.sh -----
alias complex {
    echo -n "this alias
    echo " works!"
}
-----
```

```
$ login
$ complex
this    alias    works!
```

## 1.98 tackon

TACKON (or ADDPART)

Usage : tackon var pathname filename

Example : tackon x df0:c Dir # sets x to "df0:c/Dir"

or : tackon x df0: Preferences #sets x to "df0:Preferences"

Correctly adds a filename to a pathname, and puts the result in variable specified.

## 1.99 tail

TAIL

Usage : tail [filename] [num]

Example : tail readme 20

Display last "num" lines of "filename". If num is not specified, 10 is assumed. If filename is not specified, standard input (stdin) is taken instead.

## 1.100 tee

TEE

Usage : tee [file]

Example : cc test.c | tee >error.list

Copies stdin to stdout and the given file.  
If file is omitted, stderr is used.

## 1.101 touch

TOUCH

Usage : touch file1 .. fileN

Sets DateStamp of the specified files to the current date & resets archive bit.

If a file doesn't exist, touch will create an empty one for you.

## 1.102 truncate

TRUNCATE

Usage : truncate [n]

Example : alias | qsort | truncate

A filter that truncates the width of stdin to the specified number, trying to account for tab's and escape sequences. If the number is omitted, the current window width is used.

## 1.103 type

TYPE (or CAT)

Equivalent to CAT.

## 1.104 unalias

UNALIAS

Usage : unalias name .. name

Example : unalias vt

Delete aliases..

## 1.105 uniq

UNIQ

Usage : uniq

This is a filter that removes consecutive, duplicated lines in a file. It is most useful on a sorted file.

## 1.106 unset

UNSET

Usage : unset name .. name

Example : unset abc

Unset one or more variables. Deletes them entirely.

## 1.107 usage

USAGE

Usage : usage [command...command]

If called without arguments, usage gives you a short information on the special characters used. Otherwise, usage shows you the usage of the given commands. Calling a command with a '?' as the only argument will show its usage, too.

## 1.108 version

VERSION

Usage : version

Show current version name, & authors.

## 1.109 waitforport

WAITFORPORT

Usage : waitforport portname [seconds]

Example : waitforport rexx\_ced 5

Waits for a port to come up. Default time is 10 seconds.

## 1.110 whereis

WHEREIS

Usage : whereis [-r] filename [ device1...deviceN ]

Options :

-r look on all drives.

If just a file name is given, whereis searches all subdirectories of the current directory for that file. An asterisk '\*' is appended to the file. Wild cards are allowed for the file (no asterisk will be appended then), but no path names. If additional arguments are given, whereis searches only these paths, not the current directory.

## 1.111 window

WINDOW

Usage : window [-fblsaq] [dimensions]

Options :

- f (front) Window to front
- b (back) Window to back
- l (large) Window to maximum size
- s (small) Window to minimum size
- a (activate)
- q (query) Lists screens and windows open
- w (width) Ignore window width for option "-q" (query)

Various operations on CLI window. If dimensions are specified, they must be in the form x y width height, with values separated by spaces.

The command "window -l" may be very useful on PAL machines to get a full PAL window from your login sequence, or if you use overscan WorkBench.

Option -q gives, for each Screen and Window currently open, title, left edge, top edge, width, height, (depth).

## 1.112 writefile

WRITEFILE

Usage: writefile varname

Writes a set of words to stdout, one word per line. Note that the name of the variable (var) must be supplied, not the value (\$var).

## 1.113 commands

abortline	action	addbuffers	addpart	alias
ascii	assign	basename	cat	cd
chgrp	chmod	chown	class	close
cls	copy	cp	date	dec
delete	dir	diskchange	echo	else
endif	error	exec	fault	filenote
flist	fltlower	fltupper	foreach	forever
forline	fornum	getenv	goto	head
help	history	howmany	htype	if
inc	info	input	join	keymap
label	linecnt	ln	local	ls
makelink	man	md	mem	menu
mkdir	mv	open	path	pri
protect	ps	pwd	qsort	quit

rback	readfile	rehash	relabel	rename
resident	return	rm	rpn	run
rxrec	rxsend	search	set	setenv
sleep	split	stack	strhead	strings
strleft	strlen	strmid	strright	strtail
source	tackon	tail	tee	touch
truncate	type	unalias	uniq	unset
usage	version	waitforport	whereis	window
writefile				

## 1.114 `_abbrev`

`_abbrev`

Holds a number which lets you select the various modes of command-abbreviation:

- 0 internal commands and commands buffered with "rehash" can no longer be abbreviated (same as "unset `_abbrev`")
- 1 internal commands can be abbreviated
- 2 commands buffered with "rehash" can be abbreviated, the first (partially) matching command from the list is taken
- 4 commands buffered with "rehash" can be abbreviated, if the command matches a buffered command completely, then this is taken, else the first partially matching command from the list is taken

Numbers can be added to combine modes.

The main difference between '2' and '4' is that '2' does not recognize a completely matching command if it has already found a partially matching command earlier in the list. Eg, you type "ed" and you have (in this order) "EdPlayer" and "Ed" in your list, then "Ed" can never be called (except with absolute path). So '4' first seeks for a completely matching command -- and if it cannot find anything then (and only then) it searches for an abbreviated command.

Thus it makes obviously no sense to use '2' and '4' together.

Variable is set to '5' (1+4) by default.

## 1.115 `_bground`

`_bground`

True if the shell was started with a non-interactive input.

## 1.116 `_clinumber`

`_clinumber`

Contains the number (1-20) of current CLI.

## 1.117 `_clipri`

`_clipri`

Task priority while editing command line.  
(also affects filename completion)

## 1.118 `_cquote`

`_cquote`

If set to some value, quotation marks are handled as Commodore-Shell does, so that they are parsable by `ReadArgs()` (function call in `dos.library`). Commodore-Shell treats quotes within a string "as as". Only leading quotation marks "quote" other special chars (like spaces). In contrast to UNIX shells where quotation marks always "quote" other chars - regardless of their position. UNIX behavior (`_cquote` unset) is default.

## 1.119 `_cwd`

`_cwd`

Holds a string representing the current directory we are in from root. The SHELL can get confused as to its current directory if some external program changes the directory. Use `PWD` to rebuild the `_cwd` variable in these cases.

## 1.120 `_debug`

`_debug`

Debug mode... use it if you dare. must be set to some value

## 1.121 `_dirformat`

`_dirformat`

Holds a format string that (if this variable is set) substitutes the internal default format string of the "dir" command.

Used to keep aliases short and to bypass problems with `dir`'s format option `"-z"` (eg, it's not possible to specify other options after `-z` without using `@pickargs/@pickopts`).

The format string is limited to a maximum of 80 characters.

## 1.122 `_every`

`_every`

Contains the name of a command that is to be executed every time just before the prompt is printed. Do not use this to echo the prompt.

## 1.123 `_except`

`_except`

See `EXCEPTION`

## 1.124 `_failat`

`_failat`

If a command returns with an error code higher than this, the batch file aborts. The default is 20.

## 1.125 `_hilite`

`_hilite`

Holds the font attributes used for highlighting. One letter for one attribute:

- `b` for bold
- `i` for italic
- `u` for underlined
- `r` for reverse
- `c3` for foreground color 3
- `c3,2` for foreground color 3 and background color 2

Any combinations are allowed. `_hilite` defaults to `"c7"`, in terminal mode to `"r"`.

## 1.126 `_history`

`_history`

This variable is set to a numerical value, and specifies how far back your history should extend. Set it to 0 to disable history, for example if you test your programs for memory leaks. Defaults to 50.

## 1.127 `_insert`

`_insert`

Sets the default for insert/overtyping mode for command line editing. ESC-i toggles between, but after <RET> the default is set back as indicated by this variable. By default `_insert` is 1, unsetting `_insert` will make overtype the default.

## 1.128 `_ioerr`

`_ioerr`

Contains the secondary error code for the last command. Will be changed after every external command and after a failed internal command. See `@ioerr( )`

## 1.129 `_kick2x`

`_kick2x`

True if `exec.library V37+` could be opened (which means that kickstart 2.0 is around)

## 1.130 `_kick3x`

`_kick3x`

True if `exec.library V39+` could be opened (which means that kickstart 3.0 is around)

## 1.131 `_lasterr`

`_lasterr`

Return code of last command executed. This includes internal commands as well as external commands, so to use this variable you must check it IMMEDIATELY after the command in question.

## 1.132 `_lcd`

`_lcd`

Holds the name of the last directory. The builtin alias 'dswap' cd's to that directory. If called again, you're back where you were.

## 1.133 `_man`

`_man`

The path and name of your .doc files. Defaults to 'ssh:ssh.doc'

## 1.134 `_maxerr`

`_maxerr`

The worst (highest) return value to date. To use this, you usually set it to '0', then do some set of commands, then check it.

## 1.135 `_minrows`

`_minrows`

Gives the minimum number of rows a window must have to turn on quick scrolling. Defaults to 34.

## 1.136 `_nobreak`

`_nobreak`

If set to some value, disables CTRL-C.

## 1.137 `_nomatch`

`_nomatch`

If set to some value, don't check patterns if they match.  
(By default CSH aborts command execution if all patterns does not match. If at least one pattern matches CSH does not abort.)

## 1.138 `_noreq`

`_noreq`

If set to some value, disables system requesters ("Please insert volume ...."). Turned on in vt200 mode.

## 1.139 `_passed`

`_passed`

This variable contains the passed arguments when you SOURCE a file or execute a .sh file. For instance:

```
test a b c d
```

```
----- file test.sh -----
echo $_passed
foreach i ( $_passed ) "echo YO $i"
-----
```

## 1.140 `_path`

`_path`

Tells CShell where to look for executable files. The current directory and the AmigaDOS path will be searched first. The trailing slash for directories is not necessary any more. The entire path will be searched first for the <command>, then for <command>.sh (automatic shell script sourcing). Example:

```
set _path ram:c,ram:,sys:system,dhl:tools,df0:c
```

(This path has the advantage that these directories need not even exist, that you can access devices (AmigaDOS path only knows volumes under Kick 1.3) and that no disk seeks happen at startup)

## 1.141 `_prghash`

`_prghash`

The filename where the program hash list (command 'rehash') is loaded from and saved to.

## 1.142 `_prompt`

`_prompt`

This variable now can contain the following control characters:

- `%c` for color change. This highlights your prompt. See `_hilite`
- `%e` for elapsed time. The time the last command took to execute.
- `%m` for memory. This shows your current memory in K
- `%t` for time. This shows your current time in the format HH:MM:SS
- `%d` for date. This shows the current date in the format DD-MMM-YY
- `%p` for path. This inserts the current path
- `%V` for volume. This inserts the current volume
- `%n` for number. This inserts the current process number
- `%v` for version. This shows the version number of CShell
- `%h` for history. This displays the current history number
- `%f` for free store. This shows the free store on the current drive
- `%r` for pRiority. Inserts the task priority of the current
- `%s` for shells open. Inserts the result of 'howmany'
- `%U` for user. Shows current user (only with "MultiUser" package)
- `%x` for external cmd return code. Yields the last error code

The default for prompt is now `"%c%p> "`

The `if` command will set the prompt to a `'_ '` if commands are disabled while waiting for a `'endif'` or `'else'` command (interactive mode only).

### 1.143 `_pipe`

`_pipe`

The directory where temporaries are stored. Default: `'T:'`

### 1.144 `_qcd`

`_qcd`

Holds the name of the file where the all directories on your hard disk are stored. If not set, disables quick cd-ing.

### 1.145 `_rback`

`_rback`

Is the name of the command to be the prepended to the command line when `'&'` was added to it. Defaults to `'rback'`, can't be a multi word command yet.

### 1.146 `_rxpath`

`_rxpath`

The same as with `_path`, but this is where CShell looks for `.rexx` files. Defaults to `REXX`:

### 1.147 `_scroll`

`_scroll`

Holds the number of lines to be scrolled at once when quick scrolling is used. If unset or `<=1`, quick scrolling is off. Defaults to 3.

### 1.148 `_terminal`

`_terminal`

Indicates whether or not shell was started in terminal mode.

### 1.149 `_titlebar`

`_titlebar`

The same control characters as for the `_prompt` can be used for `_titlebar`, too. The only difference is that `%c` is ignored. The titlebar is updated every time before the prompt appears.

### 1.150 `_verbose`

`_verbose`

If set to `'s'`, turns on verbose mode for source files (every command will be displayed before being executed). If set to `'a'`, displays all substeps while alias substitution. `'h'` will highlight the debug output. Any combination allowed: `set _verbose sah`

### 1.151 `_version`

`_version`

Contains the version number of the shell, e.g. 510.

## 1.152 variables

<code>_abbrev</code>	<code>_bground</code>	<code>_clinumber</code>	<code>_clipri</code>	<code>_cquote</code>
<code>_cwd</code>	<code>_debug</code>	<code>_dirformat</code>	<code>_every</code>	<code>_except</code>
<code>_failat</code>	<code>_hilite</code>	<code>_history</code>	<code>_insert</code>	<code>_ioerr</code>
<code>_kick2x</code>	<code>_kick3x</code>	<code>_lasterr</code>	<code>_lcd</code>	<code>_man</code>
<code>_maxerr</code>	<code>_minrows</code>	<code>_nobreak</code>	<code>_nomatch</code>	<code>_noreq</code>
<code>_passed</code>	<code>_path</code>	<code>_prghash</code>	<code>_prompt</code>	<code>_pipe</code>
<code>_qcd</code>	<code>_rback</code>	<code>_rxpath</code>	<code>_scroll</code>	<code>_terminal</code>
<code>_titlebar</code>	<code>_verbose</code>	<code>_version</code>		

## 1.153 @abbrev

```
@abbrev( str1 str2 [len] )
```

true if the first <len> chars of str1 are an abbreviation of str2

## 1.154 @abs

```
@abs( num )
```

returns absolute value of <num>

## 1.155 @age

```
@age( file )
```

the age of that file in days, null-string if file not found

## 1.156 @age\_mins

```
@age_mins()
```

the age of that file in minutes, null-string if file not found

## 1.157 @appsuff

```
@appsuff( name suffix )
```

appends an suffix ( .ZOO ) to a string if it's not already there

### 1.158 @arg

```
@arg( arg ... arg )
```

see @pickargs( )

### 1.159 @ask

```
@ask( title item ... item )
```

asks for confirmation of every item and returns the confirmed ones  
(very similar to @confirm(), but default is negative)

### 1.160 @availmem

```
@availmem( [type] )
```

returns free 'chip', 'fast' or otherwise total memory

### 1.161 @basename

```
@basename( path ... path )
```

returns the file name parts of the paths

### 1.162 @center

```
@center( word len )
```

returns a string of length <len> with <word> centered in it

### 1.163 @checkpoint

```
@checkpoint( portname )
```

indicates if given port exists

### 1.164 @clinum

```
@clinum( procname )
```

returns the number of the cli identified by a name or a number

---

### 1.165 @complete

```
@complete( abbrev word ... word )
```

returns the first word <abbrev> is an abbreviation of

### 1.166 @concat

```
@concat( word word ... word )
```

concatenates all words in one blank separated string, see @split

### 1.167 @confirm

```
@confirm( title item ... item )
```

asks for confirmation of every item and returns the confirmed ones (very similar to @ask(), but default is positive)

### 1.168 @console

```
@console( STDIN|STDOUT )
```

tells whether stdin or stdout are interactive (not redirected)

### 1.169 @dectohex

```
@dectohex( number )
```

returns a string representing <number> in hex

### 1.170 @delword

```
@delword( word word ... word n )
```

returns a string with the n-th word deleted.

### 1.171 @delwords

```
@delwords( word word ... word n m )
```

deletes the next m words from the n-th.

### 1.172 @dirname

```
@dirname( path )
```

strips the base name from a path, just returns the directory

### 1.173 @dirs

```
@dirs( name name name name )
```

returns the directories among the given file names, see @files

### 1.174 @dirstr

```
@dirstr( lformat file )
```

returns any info (size, date, file comment) about a file

### 1.175 @drive

```
@drive( path )
```

outputs the drive ( device ) name associated to <path>

### 1.176 @drives

```
@drives( )
```

outputs all available drives

### 1.177 @exists

```
@exists( file )
```

tells whether a file exists or not

### 1.178 @fileblks

```
@fileblks( file file ... file )
```

returns the # of blocks needed for the files, incl. dir blocks

---

### 1.179 @filedate

```
@filedate( file )
```

returns a string representing the date of the given file

### 1.180 @fileinfo

```
@fileinfo
```

Equivalent to @dirstr

### 1.181 @filelen

```
@filelen( file file ... file )
```

count the total number of bytes of the given files

### 1.182 @filenote

```
@filenote( file )
```

returns filenote of given file

### 1.183 @fileprot

```
@fileprot( file )
```

returns a string like ---arwed

### 1.184 @filereq

```
@filereq( title path&pattern filename )
```

brings up the ASL file requester and returns the selected file name

### 1.185 @files

```
@files( file file ... file )
```

gives you the files among those names, no directories. see @dirs

## 1.186 @filesize

```
@filesize
```

Equivalent to @filelen

## 1.187 @flines

```
@flines( varname )
```

counts the number of lines in a readfile-file (faster than @words)

## 1.188 @freebytes

```
@freebytes( path )
```

the number of free bytes on the given path

## 1.189 @freeblks

```
@freeblks( path )
```

the number of free blocks on the given path

## 1.190 @freestore

```
@freestore( path )
```

the amount of free store on that path, given in K, M and G

## 1.191 @getenv

```
@getenv( varname )
```

returns the value of the named env: variable

## 1.192 @getclass

```
@getclass( file )
```

returns the class (type) of the file. See chapter XIV

---

### 1.193 @hextoec

```
@hextoec( hex-number )
```

returns a string representing <hex-number> in dec

### 1.194 @howmany

```
@howmany( )
```

indicates the # of shells running

### 1.195 @index

```
@index( string pattern )
```

returns the index of pattern in string (starting at 1),  
0 if not found

### 1.196 @info

```
@info( path )
```

the corresponding line from the 'info' command, each entry a word

### 1.197 @intersect

```
@intersect( word1 word2 word3 , word4 word5 word6 )
```

returns all words which are in both lists. see @union, @member

### 1.198 @ioerr

```
@ioerr( num )
```

returns the corresponding error string to num

### 1.199 @lookfor

```
@lookfor( file paths )
```

looks for a file in the current directory and the paths. See \$\_path

---

## 1.200 @lower

```
@lower
```

lowercases its arguments. see @upper

## 1.201 @match

```
@match( word ... word "pattern" )
```

returns the words in the list that match the DOS-pattern

## 1.202 @max

```
@max( num num ... num )
```

computes the maximum of all given numbers

## 1.203 @megs

```
@megs( number )
```

expresses a number in K, M and G (-bytes), rounded correctly

## 1.204 @member

```
@member( word1 word word ... word )
```

tells you if word1 is among the remaining words

## 1.205 @min

```
@min( num num ... num )
```

computes the minimum of all given numbers

## 1.206 @mix

```
@mix( arg1 ... argn )
```

randomly mixes its arguments

## 1.207 @mounted

```
@mounted( device )
```

returns a boolean indicating whether the specified device is mounted,  
(don't add an extra colon ':' at the end)

## 1.208 @nameext

```
@nameext( filename )
```

returns all after the last dot of <filename>.

## 1.209 @nameroot

```
@nameroot( filename )
```

returns all before the LAST dot of <filename>.

## 1.210 @opt

```
@opt( arg ... arg )
```

see @pickopts( )

## 1.211 @pathname

```
@pathname( path )
```

obsolete. use @dirname

## 1.212 @pickargs

```
@pickargs( arg ... arg )
```

picks of its arguments those which don't start with a '--'

## 1.213 @pickopts

```
@pickopts( arg ... arg )
```

picks of its arguments those which start with a '--'

## 1.214 @rnd

```
@rnd( seed )
```

returns a 32 bit random number (default seed is 1);  
'seed' is optional and can be used to set new seed for @rnd( ),  
if you use seed=0 then CSH takes current system time as seed

## 1.215 @rpn

```
@rpn( expression )
```

computes the rpn expression. See rpn command

## 1.216 @scrheight

```
@scrheight( )
```

outputs the current height of the screen the shell is running in

## 1.217 @scrwidth

```
@scrwidth( )
```

outputs the current width of the screen the shell is running in

## 1.218 @sortargs

```
@sortargs( name ... name )
```

sorts its arguments alphabetically

## 1.219 @sortnum

```
@sortnum( number ... number )
```

sorts its arguments numerically

## 1.220 @split

```
@split( string )
```

makes each blank separated part of @string a word, see @concat

## 1.221 @strcmp

```
@strcmp( name name )
```

returns -1, 0 or 1 depending of alphabetical comparison  
(case-sensitive)

## 1.222 @stricmp

```
@stricmp( name name )
```

returns -1, 0 or 1 depending of alphabetical comparison  
(case-insensitive)

## 1.223 @strhead

```
@strhead( breakchar string )
```

see strhead command

## 1.224 @strleft

```
@strleft( string number )
```

see strleft command

## 1.225 @strmid

```
@strmid( string n1 n2 )
```

see strmid command

## 1.226 @strright

```
@strright( string n )
```

see strright command

## 1.227 @strtail

```
@strtail( breakchar string )
```

see strtail command

### 1.228 @subfile

```
@subfile( varname n m )
```

like @subwords, but acts on a readfile-file and is faster

### 1.229 @subwords

```
@subwords( word ... word n m )
```

returns the next m words word of the given list starting from n

### 1.230 @tackon

```
@tackon( path file )
```

see tackon command

### 1.231 @trim

```
@trim( word word word )
```

removes all leading and trailing blanks from the words

### 1.232 @unique

```
@unique( word ... word )
```

sorts the arguments and makes each of them unique

### 1.233 @union

```
@union( name ... name , name ... name )
```

returns all names that are in either list. See @intersect, @member

### 1.234 @upper

```
@upper( word ... word )
```

upper cases the given words. see @lower

---

### 1.235 @volume

```
@volume( path )
```

returns the volume name in that path or ""

### 1.236 @wincols

```
@wincols( )
```

returns the number of columns in the current shell window

### 1.237 @winheight

```
@winheight( )
```

outputs the height of your window in pixels

### 1.238 @winleft

```
@winleft( )
```

returns the left edge of your window

### 1.239 @winrows

```
@winrows( )
```

returns the number of lines in the current shell window

### 1.240 @wintop

```
@wintop( )
```

returns the top edge of your window

### 1.241 @winwidth

```
@winwidth( )
```

outputs the width of your window in pixels

## 1.242 @without

```
@without( name ... name , name ... name )
```

returns all names of list 1 that are not in list 2

## 1.243 @word

```
@word( name ... name n )
```

picks the n-th word from the list.

## 1.244 @words

```
@words( name ... name )
```

returns the number of words in the list.

## 1.245 functions

@abbrev	@abs	@age	@age_mins	@appsuff
@arg	@ask	@availmem	@basename	@center
@checkport	@clinum	@complete	@concat	@confirm
@console	@dectohex	@delword	@delwords	@dirname
@dirs	@dirstr	@drive	@drives	@exists
@fileblks	@filedate	@fileinfo	@filelen	@filenote
@fileprot	@filereq	@files	@filesize	@flines
@freebytes	@freeblks	@freestore	@getenv	@getclass
@hextodec	@howmany	@index	@info	@intersect
@ioerr	@lookfor	@lower	@match	@max
@megs	@member	@min	@mix	@mounted
@nameext	@nameroot	@opt	@pathname	@pickargs
@pickopts	@rnd	@rpn	@scrheight	@scrwidth
@sortargs	@sortnum	@split	@strcmp	@stricmp
@strhead	@strleft	@strmid	@strright	@strtail
@subfile	@subwords	@tackon	@trim	@unique
@union	@upper	@volume	@wincols	@winheight
@winleft	@winrows	@wintop	@winwidth	@without
@word	@words			