

Simple MACro expander, Version DOS V3.03

Usage: MAC [option..] [pathname..]

<option>:

-u[sage] : Usage on stdout.
-b[built] : Built information on stdout.
-h[elp] : Help on stdout.
-s[tdin] : Use MAC as filter accepting standard input (e.g. pipe).
-e[cho] 'pathname' : Echo macros directives from stdin into file. (*)
-d[efine] nam 'val' : Equivalent to directive #define nam val. (*)
-i[nt] nam 'expr' : Equivalent to directive #int nam expr. (*)
-r[eal] nam 'expr' : Equivalent to directive #real nam expr. (*)
-f[ix] nam 'expr' : Equivalent to directive #fix nam expr. (*)
-p[refix] nam : Prefix Mode, declare prefix of macros used outside directives.
-v[erbose] : Verbose Mode, detailed trace to stderr.
-c[omment] : Comment Mode, send MAC comments to stderr.
-q[uiet] : Quiet Mode, remove warning messages.
-l[ine] : Line Mode, keep output and input lines numbering equal.

(*) On command line, it is recommended to enclose value or expression between SINGLE quotes. They are mandatory if value or expression has more than one word, contains weird symbols...

<pathname>:

Pathname of ASCII file(s) to be expanded sequentially (last in is first processed).

Standard input is always processed after the process of these files is completed.

Operations recognized by the MACro expander during arithmetic evaluation:

+ - * / % ^ > < >= <= = != ! || &&
(sin()) (cos()) (tan()) (asin()) (acos()) (atan())
(exp()) (log()) (log10()) (sinh()) (cosh()) (tanh())
(abs()) (floor()) (ceil()) (round()) (sign())

Inside processed files, directives recognized by the MACro expander:

```
#define nam [val]      : Macro definition.
#default nam [val]    : Macro definition, if macro was not yet defined.
#undef nam [nam..]    : Undefine the macro[s].
#int nam [expr]       : [Macro definition with] arithmetic evaluation, casting to int.
#real[dig] nam [expr]: [Macro definition with] arithmetic evaluation,
                        casting to real (scientific).
#fix[dig] nam [expr]  : [Macro definition with] arithmetic evaluation,
                        casting to real (fixed precision).
#ask nam [val]        : Macro definition by [question 'val' and] answer from user,
                        if not yet defined.
#msg [val]            : Send message 'val' to stderr.
#cat nam [val..]      : Concatenate 'val..' into first macro.
#freeze nam [nam..]   : Protect content of macros from processing.
#melt nam [nam..]     : Unprotect content of macros from processing.
#if expr              : Execute if block when after arithmetic evaluation, 'expr' is not 0.
#ifdef nam [val]       : Execute ifdef block when 'nam' is defined [equal to 'val'].
#ifndef nam [val]       : Execute ifndef block when 'nam' is undefined [or not equal to 'val'].
#else [comment]        : Else block. ['comment' ignored.]
#endif [comment]       : End of conditional block. ['comment' ignored.]
#include val           : File to be included (pathname between single quotes).
#insert val           : Data file to copy without processing (pathname between single quotes).
#exit [val]           : Exit from current file. [Send message 'val' on stderr.]
#quit [val]           : Normal MAC termination. [Send message 'val' on stderr.]
#abort [val]          : Abnormal termination. [Send message 'val' on stderr.]
## [val]              : MAC single line comment. [In comment mode, 'val' is traced on stderr.]
#* [comment]          : MAC single line comment. ['comment' ignored.]
```

- MACro expander advanced features:

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#list nam             : Declare existing macro as a list and split it into elements.
[@..]nam              : Indirection using symbol '@' ahead macro name 'nam'.
```

- Debug oriented macro directives (normally processed):

#verbose [val] : Toggle verbose mode On|Off [or set/reset if value is (not) 0].
#macro [nam..] : List all macros on stderr [or macros by name 'nam..'].
#tag [val] : Define file tag name 'val' of currently processed file.

- Debug oriented macro directives (unconditionally processed):

#skip [expr] : Toggle Skip Mode On|Off [set/reset if 'expr' is (not) 0].
#stop [val] : MAC normal termination. [Send message 'val' on stderr.]
#status [val] : Current status of MAC on stderr. ['val' is a title.]

Predefined macros:

\$V : Current version of MAC (DOS V3.03).
\$D : Current time and date at the beginning of the process.
\$F : Current file name.
\$T : Current file tag name (default: file name).
\$N : Empty string.

Quotes in MAC:

'text' (option) : Field delimiters, quotes are removed by UNIX.
'text' (directive) : Determine field, quotes are removed in output.
'text' (data) : No effect. Quotes remain.
`text` (dir & data) : Text unprocessed by MAC, quotes are removed at output.
"text" (dir & data) : No effect. Quotes remain.

Valid macro identifier in MAC:

First character : A..Z a..z \$ or _
Other characters : A..Z a..z 0..9 [] \$ or _