

Escape Characters

All DOS versions interpret certain characters before executing a command.

Some well known examples are the percent sign (%), and the redirection symbols (<|>).

Windows 95/98 and NT, and OS/2 too, also interpret double quotes (") and ampersands (&), as shown in the [Conditional Execution](#) page.

In batch files, the percent sign may be "escaped" by using a double percent sign (%%).

That way, a single percent sign will be used as literal within the command line, instead of being further interpreted.

In Windows 95/98 and NT, and OS/2 too, redirection symbols may be escaped by placing them between double quotes (">"). However, the quotes themselves will be passed to the command too, unlike the double percent sign.

Windows NT and OS/2 also allow the use of carets (^) to escape special characters. Even linefeeds can be escaped this way, as is shown in the [Useless Tips](#) page.

If you intend to "nest" commands with escaped characters, you may need to escape the escape character itself too.

In general, that won't make it any easier to read or debug your batch files, however.

Since the introduction of [delayed variable expansion](#) a new challenge is to escape exclamation marks, the "delayed" version of the percent sign.

Unlike percent signs, that can be escaped by doubling them, exclamation marks cannot be escaped by adding an extra exclamation mark.

Nor does a caret before the exclamation mark work, unless quoted (i.e. `ECHO ^!` will fail to display an exclamation mark, whereas `ECHO " ^! "` will display a *quoted* exclamation mark: " ! ").

Jaime Ramos sent me [this link](http://stackoverflow.com/questions/3288552/how-can-i-escape-an-exclamation-mark-in-cmd-scripts) (http://stackoverflow.com/questions/3288552/how-can-i-escape-an-exclamation-mark-in-cmd-scripts) where the solution can be found: use `^^!`.

The trick is that a single caret will be used to escape the exclamation mark in the first "pass" of command line interpretation, but delayed variable expansion adds a second "pass" where the exclamation mark will be interpreted. If you don't get it, never mind, just remember the double caret before the exclamation mark.

To Be Investigated

Recently I discovered that (in Windows 7) with `ECHO` commands, an entire line can often be escaped with a single ASCII character 26 (Ctrl+Z or EOF, End Of File) as the first character to be ECHOed.

Only the > character may sometimes still be interpreted as "redirect to ..."

Summary

Escape Characters

Character to be escaped	Escape Sequence	Remark
%	%%	May not always be required in doublequoted strings, just try
^	^^	May not always be required in doublequoted strings, but it won't hurt
&	^&	
<	^<	
>	^>	
	^	
,	^,	Required only in the <u>FOR /F</u> "subject" (i.e. between the parenthesis), <i>unless backq</i> is used
`	^`	Required only in the <u>FOR /F</u> "subject" (i.e. between the parenthesis), <i>if backq</i> is used
,	^,	Required only in the <u>FOR /F</u> "subject" (i.e. between the parenthesis), even in doublequoted strings
;	^;	
=	^=	
(^(
))	
!	^^!	Required only when delayed variable expansion is active
\	\\	Required only in the regex pattern of <u>FINDSTR</u>
[\[
]	\]	
"	\"	

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