HyperTalk™
Quick Reference Card
The information in this Quick Reference Card pertains to HyperCard version 1.2.2.

## Script editor command summary

<table>
<thead>
<tr>
<th>Key combination</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command-A</td>
<td>Select entire script</td>
</tr>
<tr>
<td>Command-C</td>
<td>Copy selection to Clipboard</td>
</tr>
<tr>
<td>Command-F</td>
<td>Find text (same as Find button)</td>
</tr>
<tr>
<td>Command-G</td>
<td>Find next occurrence of same text</td>
</tr>
<tr>
<td>Command-H</td>
<td>Find current selection</td>
</tr>
<tr>
<td>Command-P</td>
<td>Print selection or (if no selection) entire script (same as Print button)</td>
</tr>
<tr>
<td>Command-period</td>
<td>Close script without saving changes (same as Cancel button)</td>
</tr>
<tr>
<td>Command-V</td>
<td>Paste Clipboard contents at insertion point</td>
</tr>
<tr>
<td>Command-X</td>
<td>Cut selection to Clipboard</td>
</tr>
<tr>
<td>Enter</td>
<td>Close script and save changes (same as OK button)</td>
</tr>
<tr>
<td>Option-Return</td>
<td>Wrap line without return character (&quot;soft&quot; return—symbolized by ~ in scripts. Don't use a &quot;soft&quot; return inside quotation marks.)</td>
</tr>
<tr>
<td>Return</td>
<td>Return character—indicates end of HyperTalk statement</td>
</tr>
<tr>
<td>Tab</td>
<td>Format script</td>
</tr>
</tbody>
</table>

## Shortcuts for seeing scripts

<table>
<thead>
<tr>
<th>Key combination</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command-Option</td>
<td>Display buttons; click a button with keys down to edit its script</td>
</tr>
<tr>
<td>Shift-Command-Option</td>
<td>Display fields and buttons; click a field (or button) with keys down to edit its script</td>
</tr>
<tr>
<td>Command-Option-C</td>
<td>Edit script of current card</td>
</tr>
<tr>
<td>Command-Option-B</td>
<td>Edit script of current background</td>
</tr>
<tr>
<td>Command-Option-S</td>
<td>Edit script of current stack</td>
</tr>
</tbody>
</table>
Commands

In the statements listed below, square brackets [ ] enclose optional elements. (Don't type the square brackets.) Words in *italic* are placeholders describing general elements, not specific names; you must replace them in an actual command. It doesn't matter whether you use uppercase or lowercase letters in HyperTalk; names formed from two words are shown with an embedded capital letter (like This) merely to make them more readable. The HyperTalk prepositions of and in are interchangeable.

add expression to destination
answer "question" [with "reply" [or "reply2" [or "reply3"]]]
arrowKey keyName
ask [password] question [with defaultAnswer]
beep number
choose toolName tool
click at location [with key[, key2[, key3]]]
close file fileName
close printing
convert container to format [and format]
controlKey asciNumber
delete chunk [of container]
dial expression [with modem [modemCommands]]
divide destination by expression
doMenu menultem
drag from start to finish [with key[, key2[, key3]]]
edit script of object
enterKey
find [chars] expression [in field fieldDesignator]
find [word] expression [in field fieldDesignator]
find string expression [in field fieldDesignator]
find whole expression [in field fieldDesignator]
functionKey keyNumber
get expression
go [to] [stack] "stackName"
go [to] bkgnDescriptor [of [stack] "stackName"]
go [to] cardDescriptor [of bkgnDescriptor] [of [stack] "stackName"]
help
hide menuBar
hide windowName
hide object
hide picture
lock screen
multiply destination by expression
open [document with] application
open file fileName
open printing [with dialog]
play "voice" [tempo tempoValue] ["notes"]
play stop
pop card [preposition destination]
print card
print expression cards
print cardDescriptor
print document with application
push cardDescriptor
put expression [preposition destination]
read from file fileName until character
read from file fileName for numberOfCharacters
reset paint
returnKey
select object
select [preposition] expression of field
select [preposition] expression of msg
select [preposition] text of field
select empty
set [the] property [of object] to value
show [all] cards
show number cards
show menuBar
show windowName [at h, v]
show object [at h, v]
show picture
sort [direction] [style] by expression
subtract expression from destination
tabKey
type expression [with key[ , key2[ , key3]]]
unlock screen [with effectName]
visual [effect] effectName [speed] [to image]
wait [for] number [seconds]
wait until condition
wait while condition
write source to file fileName
Functions

In the statements listed below, square brackets [ ] enclose optional elements. (Don't type the square brackets.) Words in italic are placeholders describing general elements, not specific names; you must replace them in an actual command. It doesn't matter whether you use uppercase or lowercase letters in HyperTalk; names formed from two words are shown with an embedded capital letter (like This) merely to make them more readable. The HyperTalk prepositions of and in are interchangeable.

When using functions in HyperTalk statements you must either use the word the before the function name or add parentheses after it. Both forms are shown in the list that follows. Factor is a single value, such as the number 5 or a container holding a value; expression can be a single factor or a combination of several factors and operators that results in a value, such as \((2+3)\) or \((2+(\text{field 1}))\). Parameters in a list must be separated by commas.

- the abs of factor
  - abs(expression)
  - Absolute value
- annuity(rate, periods)
- the atan of factor
  - atan(expression)
  - Arc tangent—radians
- average(list)
- the charToNum of factor
  - charToNum(expression)
  - Returns the ASCII value of a character
- the clickH
- the clickLoc
  - clickLoc()
  - Gives horizontal and vertical coordinates of where the user last clicked
- the clickV
- the commandKey
  - commandKey()
  - Condition of the Command key: up or down
- compound(rate, periods)
- the cos of factor
  - cos(expression)
  - Cosine—radians
- the [modifier] date
- the diskSpace
  - diskSpace()
  - Amount of free space on the current disk
- the exp of factor
  - exp(expression)
  - Mathematical exponential
- the expl of factor
  - expl(expression)
  - 1 less than mathematical exponential: \(\exp() - 1\)
- the exp2 of factor
  - exp2(expression)
  - The value of 2 raised to the power of factor
the foundText
the foundChunk
the foundLine
the foundField
the length of factor
length(expression)
the ln of factor
ln(expression)
the lnl of factor
lnl(expression)
the log2 of factor
log2(expression)
max(list)
min(list)
the mouse
mouse()
the mouseClick
mouseClick()
the mouseH
mouseH()
the mouseLoc
mouseLoc()
the mouseV
mouseV()

[the] number of objects
[the] number of chunks in factor

[the] number of cards of background
the numToChar of factor
numToChar(expression)
offset(string1, string2)

the optionKey
optionKey()
the param of factor
param(expression)
the paramCount
paramCount()
the params
params()
the random of factor
random(expression)
the result
result()
the round of factor
round(expression)
the screenRect
screenRect()
the seconds
seconds()
the selectedText
the selectedChunk
the selectedLine
the selectedField
the shiftKey
shiftKey()
the sin of factor
sin(expression)
the sound
sound()
the sqrt of factor
sqrt(expression)
the tan of factor
tan(expression)
the target
target()
the ticks
ticks()
the [modifier] time
time()
the tool
tool()
the trunc of factor
trunc(expression)
the value of factor
value(expression)
the [long] version [of HyperCard]
version()
the version of stackDescriptor

Gives a random integer from 1 to the value of factor

Returns a text string if find or go is unsuccessful

Rounds to nearest integer: an odd integer plus 0.5 rounds up; an even integer, down

The rectangle of the screen in which the menu bar is displayed: left, top, right, bottom coordinates

Number of seconds between midnight January 1, 1904, and the current time in your Macintosh

Returns the text currently selected

Describes the location of the selected text

Tells which line the selected text is in

Tells which field the selected text is in

Condition of the Shift key: up or down

Sine—radians

Name of sound resource currently playing, or "done" if none is playing

Square root of a positive number—a negative number gives the result $\text{NAN}(001)$ meaning “not a number”

Tangent—radians

Identifies the original recipient of a message

Number of ticks ($\frac{1}{60}$ second) since the Macintosh was turned on or restarted

Gives time as a text string: long, short, abbreviated

Name of currently chosen tool

The integer part of a number in function

Gives the value of a string as an expression

Returns the version number of HyperCard

Tells version of HyperCard used to create, compact, change since compacted, and make latest changes, plus the date modified in seconds since January 1, 1904
# Operator precedence

<table>
<thead>
<tr>
<th>Order</th>
<th>Operators</th>
<th>Type of operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>( )</td>
<td>Grouping</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>Minus sign for numbers</td>
</tr>
<tr>
<td></td>
<td>not</td>
<td>Logical negation for Boolean values</td>
</tr>
<tr>
<td>3</td>
<td>^</td>
<td>Exponentiation for numbers</td>
</tr>
<tr>
<td>4</td>
<td>* / div</td>
<td>Multiplication and division for numbers</td>
</tr>
<tr>
<td></td>
<td>mod</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>+ -</td>
<td>Addition and subtraction for numbers</td>
</tr>
<tr>
<td>6</td>
<td>&amp; &amp;&amp;</td>
<td>Concatenation of text</td>
</tr>
<tr>
<td>7</td>
<td>&gt; &lt; &lt;= &gt;=</td>
<td>Comparison for numbers or text</td>
</tr>
<tr>
<td></td>
<td>is in contains</td>
<td>Comparison for text</td>
</tr>
<tr>
<td></td>
<td>is not in</td>
<td>Comparison for text</td>
</tr>
<tr>
<td>8</td>
<td>= is is not &lt;&gt; ≠</td>
<td>Comparison for numbers or text</td>
</tr>
<tr>
<td>9</td>
<td>and</td>
<td>Logical for Boolean values</td>
</tr>
<tr>
<td>10</td>
<td>or</td>
<td>Logical for Boolean values</td>
</tr>
</tbody>
</table>