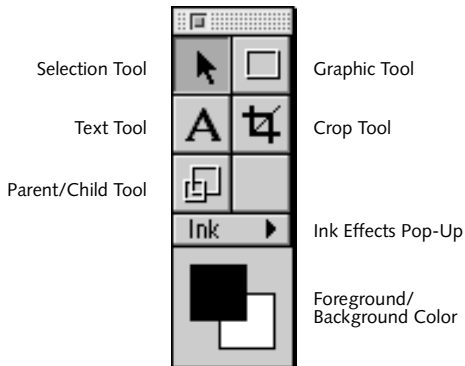


quick reference

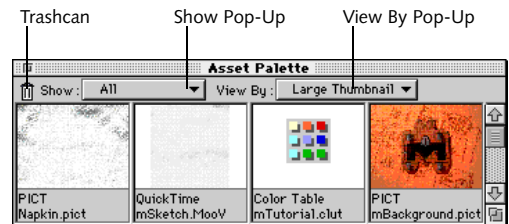
Here's a handy quick reference for mTropolis! Included are quick views of mTropolis palettes, keyboard shortcuts, a Miniscript reference, and lists of component attributes.

mTROPOLIS PALETTES

TOOL PALETTE

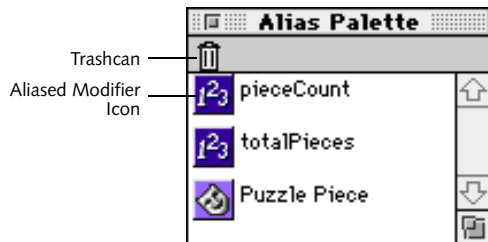


ASSET PALETTE



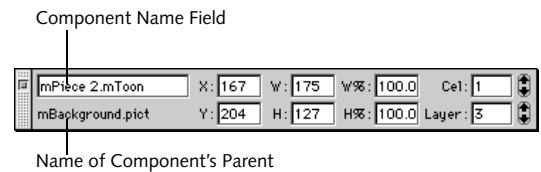
To remove an asset from the project, drag its thumbnail to the trashcan.

ALIAS PALETTE

























To delete an alias, drag its icon to the trashcan.













OBJECT INFO PALETTE















LOGIC PALETTE

Behavior			Miniscript Modifier
Messenger			If Messenger
Timer Messenger			Boundary Detection Messenger
Collision Messenger			Keyboard Messenger
boolean Variable			Compound Variable
Integer Variable			String Variable
Integer Range Variable			Floating-Point Variable
Vector Variable			Point Variable
Change Scene Modifier			Return Modifier
Shared Scene Modifier			Set Modifier
Save and Restore Modifier			

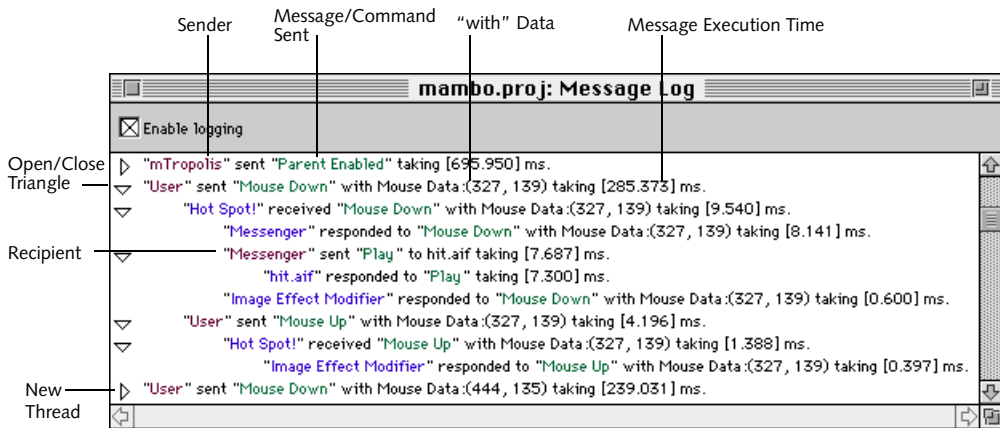
EXTRAS PALETTE

Media Cue Messenger			Panorama Messenger
Track Control Modifier			Cursor Modifier
Sound Panning Modifier			Sound Fade Modifier
List Variable			Object Reference Variable
Panorama Navigation			Navigation Modifier
Open Project Modifier			

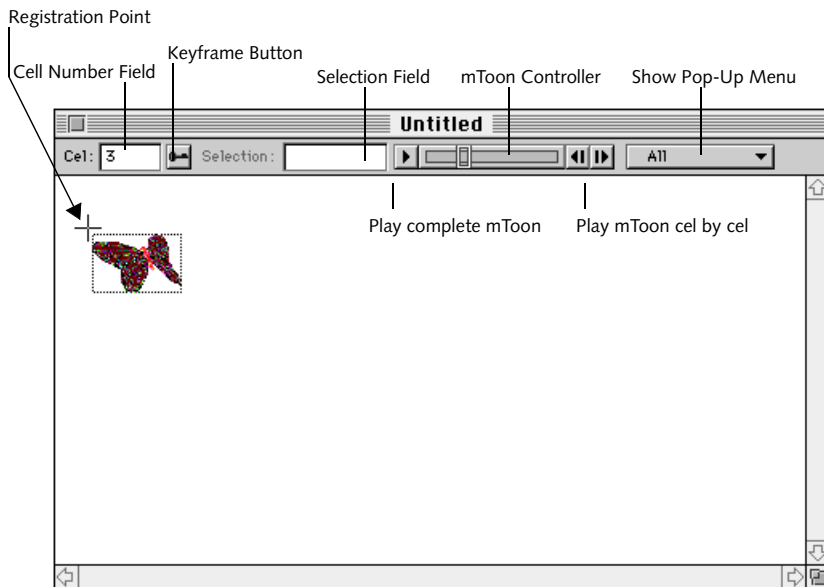
EFFECTS PALETTE

Scene Transition Modifier			Element Transition Modifier
Simple Motion Modifier			Path Motion Messenger
Drag Motion Modifier			Vector Motion Modifier
Sound Effect Modifier			Text Style Modifier
Graphic Modifier			Color Table Modifier
Gradient Modifier			Image Effect Modifier

MESSAGE LOG WINDOW



mTOON EDITOR WINDOW



FILE MENU SHORTCUTS

Menu Option	Press
New Project	⌘-N
New Library	⌘-Option-N
Open	⌘-O
Close	⌘-W
Save	⌘-S
Link Media File	⌘-L
Link Media Multiple Files	⌘-Option-L
Run From Start	⌘-T
Run From Start (with mTropolis visible)	⌘-Option-T
Run From Selection	⌘-Y
Run From Selection (with mTropolis visible)	⌘-Option-Y
Return to Edit Mode at Current Scene	⌘-. (period)
Quit	⌘-Q

EDIT MENU SHORTCUTS

Menu Option	Press
Undo	⌘-Z
Cut	⌘-X
Copy	⌘-C
Paste	⌘-V
Select All	⌘-A
Duplicate	⌘-D

FORMAT MENU SHORTCUTS

Menu Option	Press
Plain	⌘-Shift-P
Bold	⌘-Shift-B
Italic	⌘-Shift-I
Underline	⌘-Shift-U

ARRANGE MENU SHORTCUTS

Menu Option	Press
Bring to Front	⌘-Option-/
Send to Back	⌘-Option-\
Bring Forward	⌘-/
Send Backward	⌘-\

OBJECT MENU SHORTCUTS

Menu Option	Press
New Section	⌘-Option-E
New Subsection	⌘-Option-F
New Scene	⌘-Option-S
New Graphic	⌘-Option-G
New Sound	⌘-Option-A
New Text	⌘-Option-D
Element Info	⌘-I
Asset Info	⌘-Option-I
Revert Size	⌘-R
Lock	⌘-K
Find	⌘-F
Make Alias	⌘-M
Break Alias	⌘-Option-M

VIEW MENU SHORTCUTS

Menu Option	Press
Layout Window	⌘-1
Structure Window	⌘-2
Layers Window	⌘-3
Modifier Palettes Group 1	⌘-Option-1
Modifier Palettes Group 2	⌘-Option-2
Modifier Palettes Group 3	⌘-Option-3
Tool Palette	⌘-4
Alias Palette	⌘-5
Asset Palette	⌘-6
Object Info Palette	⌘-7
Message Log Window	⌘-8
Author Messages Window	⌘-9
Frames toggle	⌘-Shift-F
Modifiers toggle	⌘-Shift-M
Names toggle	⌘-Shift-N
Sync Windows	⌘-U

mTOON MENU SHORTCUTS

Menu Option	Press
Align and Trim Cels	⌘-` (left single quote)
Key Frame	⌘-; (semicolon)
mToon Info	⌘-I

STRUCTURE WINDOW SHORTCUTS

Press	Action
Down Arrow or Tab	Move selection to next item in hierarchy
Up Arrow or Shift-Tab	Move selection to previous item in hierarchy
⌘-Up Arrow	Move selected item up one position in the messaging order
⌘-Down Arrow	Move selected item down one position in the messaging order
⌘-Option-Up Arrow	Display the next level above the current selection
⌘-Shift-Option-Up Arrow	Display all levels above the current selection
⌘-Option-Down Arrow	Display only current selection
⌘-Right Arrow or Click closed triangle	Expand selection (open triangle)
⌘-Option-Right Arrow or Option-Click closed triangle	Expand entire hierarchy below selection
⌘-Left Arrow or Click open triangle	Collapse selection (close triangle)
⌘-Option-Left Arrow or Option-Click open triangle	Collapse entire hierarchy below selection
⌘-Click logging indicators	Change logging state of all selected items to the state of the clicked indicator
Option-Click logging indicator	Change the state of the selected indicator and all indicators at lower structure levels

LAYOUT WINDOW SHORTCUTS

Press	Action
Up Arrow	Move selection up one pixel
Down Arrow	Move selection down one pixel
Left Arrow	Move selection left one pixel
Right Arrow	Move selection right one pixel

SELECT OPTIONS (ANY WINDOW)

Press	Action
Shift-Select	Select or deselect multiple items
Option-drag	Move a copy of the selected item(s)

MINISCRIPIT STATEMENTS

Statement Syntax	Description
set <i>variable</i> to <i>value</i>	Assignment
send " <i>message</i> " to <i>destination</i>	Message sending
if <i>expression</i> then <i>statement</i>	Conditional branching
or	
if <i>expression</i> ₁ then <i>statements</i>	
else if <i>expression</i> _{<i>n</i>} then <i>statements</i>	
else <i>statements</i>	
end if	

DATA TYPES AND SYNTAX

Data Type	Syntax	Example
Boolean	true or false	true false
Floating Point	<i>n.n</i>	1.0, 60.547
Integer	<i>n</i>	5, 50
Integer Range	(<i>n</i> _{start} thru <i>n</i> _{end}) parentheses are optional	(1 thru 10) (0 thru 99)
List	{ <i>n</i> ₁ , <i>n</i> ₂ , . . . , <i>n</i> _{last} } items in a list can have any data type except list	{10, 15, 30} {"dog", "cat"}
Object Reference	Special: See "Building Blocks for Specifying Components Via Miniscript" on page 6.	element element.parent scene.myPict
Point	(<i>n</i> _{<i>x</i>} , <i>n</i> _{<i>y</i>})	(0, 0) (240, 320)
String	" <i>text</i> "	"mFactory"
Vector	(<i>n</i> _{angle} ° <i>n</i> · <i>n</i> _{magnitude}) the degrees symbol can be typed by pressing Shift-Option-8 on Macintosh	(90° 1.0) (60° 2.5)

BUILDING BLOCKS FOR SPECIFYING COMPONENTS VIA MINIScript

Destination	Syntax
Project	<code>project</code>
Section	<code>section</code>
Subsection	<code>subsection</code>
Scene	<code>scene</code>
Element	<code>element</code> (or simply omit as element is the default destination)
Element's parent	<code>element.parent</code> or <code>element's parent</code>
Miniscript modifier's parent	<code>parent</code>
Source's parent (The source is the modifier that generated the message that triggered the Miniscript modifier.)	<code>source.parent</code> or <code>source's parent</code>
Active scene	<code>activeScene</code>
Shared scene	<code>sharedScene</code>
Next element	<code>element.next</code> or <code>element's next</code>
Next modifier (either on the same element or in the same behavior that contains the Miniscript modifier)	<code>next</code>
Previous element	<code>element.previous</code> or <code>element's previous</code>
Previous modifier (either on the same element or in the same behavior that contains the Miniscript modifier)	<code>previous</code>
Element's sibling or ancestor (an ancestor is a component located above the element in the structural hierarchy)	<code>elementname</code> (i.e., use the actual name of the element's sibling or ancestor)
Element's immediate child (a child just one level below the element in the structural hierarchy)	<code>elementname</code> (i.e., use the actual name of the element's immediate child. Note that children more than one level below the element cannot be targeted by name alone, due to scoping rules.)

OPERATORS

Operator	Description
<code>()</code>	Group expressions
<code>^</code>	Exponentiation
<code>*</code>	Multiplication
<code>/</code>	Division
<code>div</code>	Integer division
<code>mod</code>	Modulus
<code>+</code>	Addition
<code>-</code>	Subtraction and negation
<code>&</code>	String concatenation
<code>and</code>	boolean and
<code>not</code>	boolean inverse
<code>or</code>	boolean or
<code>=</code>	Equal to
<code>></code>	Greater than
<code>>=</code> or <code>>=</code>	Greater than or equal to
<code><</code>	Less than
<code><=</code> or <code><=</code>	Less than or equal to
<code><></code> or <code>≠</code>	Not equal

OPERATOR PRECEDENCE

Precedence Level	Operators
1 (highest)	<code>()</code> , expressions inside parentheses are evaluated first.
2	<code>not</code>
3	<code>^</code>
4	<code>*</code> , <code>/</code> , <code>div</code> , <code>mod</code>
5	<code>+</code> , <code>-</code>
6	<code>></code> , <code>>=</code> , <code>>=</code> , <code><</code> , <code><=</code> , <code><=</code>
7	<code>=</code> , <code><></code> , <code>≠</code>
8	<code>and</code>
9 (lowest)	<code>or</code>

MINIScript FUNCTIONS

Function Syntax	Description
<code>abs(x)</code>	Absolute value
<code>atn(x)</code> or <code>arctangent(x)</code>	Arctangent
<code>cos(x)</code> or <code>cosine(x)</code>	Cosine
<code>cosh(x)</code>	Hyperbolic cosine
<code>exp(x)</code>	Natural exponential
<code>ln(x)</code>	Natural logarithm
<code>log(x)</code>	Base 10 logarithm

Function Syntax	Description
num2str(x) or numToString(x)	Convert numeric to string
polar2rect(<i>vector</i>)	Convert polar coordinate (vector) to rectangular (point)
rect2polar(<i>point</i>)	Convert rectangular coordinate (point) to polar (vector)
round(x)	Round to whole number
rnd(x) or random(x)	Return random value between 0 and x
sgn(x)	Sign of x (-1 for negative, 0 for 0, 1 for positive)
sin(x) or sine(x)	Sine
sinh(x)	Hyperbolic sine
sqrt(x)	Square root
str2num(<i>string</i>) or stringToNum(<i>string</i>)	Convert string to floating point
tan(x) or tangent(x)	Tangent
tanh(x)	Hyperbolic tangent
trunc(x)	Truncate decimal part of x

ATTRIBUTES

Element Attribute	Type	R	W
asset	object reference or string	•	•
cache [†]	boolean	•	•
centerPosition	point	•	•
clone	boolean		•
direct [‡]	boolean	•	•
flushPriority	integer		•
globalPosition	point	•	•
height	integer	•	•
kill	boolean		•
layer	integer	•	•
mediaSize	point	•	
name	string	•	•
objectID	integer	•	
parent	object reference	•	•
position	point	•	•
redraw	boolean		•
scrollOffset	point	•	•
size	point	•	•
visible	boolean	•	•
width	integer	•	•

[†]cache is only an attribute of PICT and text elements.

[‡]direct is not supported by QuickTime VR elements

mToon Attribute	Type	R	W
cel	integer	•	•
celCount	integer	•	
loop	boolean	•	•
paused	boolean	•	•
range	integer range	•	•
rate	integer	•	•
regPoint	point	•	

Project Attribute	Type	R	W
allowQuitKey	boolean		•
userTimeout	integer	•	•

QuickTime Attribute	Type	R	W
balance	integer	•	•
controllerClick	boolean	•	•
duration	integer	•	
loop	boolean	•	•
loopBackForth	boolean	•	•
movieClick	boolean	•	•
paused	boolean	•	•
playEveryFrame	boolean	•	•
range	integer range	•	•
rate	floating point	•	•
showController	boolean	•	•
timeScale	integer	•	•
timeValue	integer	•	•
trackCount	integer	•	
trackDisable	integer/string		•
trackEnable	integer/string		•
volume	integer	•	•

QuickTime VR Attribute	Type	R	W
fov	floating point	•	•
currentHotspot	integer	•	
currentNodeName	string	•	
hotspotName[n]	string	•	
node	integer	•	•
pan	floating point	•	•
showCursor	boolean	•	•
tilt	floating point	•	•
updateMode	string	•	•
warpMode	string	•	•

Scene Attribute	Type	R	W
load	boolean		•
locked	boolean	•	•
unload	boolean		•

Sound Attribute	Type	R	W
balance	integer	•	•
loop	boolean	•	•
paused	boolean	•	•
volume	integer	•	•

Text Attribute	Type	R	W
clickedLine	integer	•	
editable	boolean	•	•
line[n]	string	•	•
lineCount	integer	•	
lineHeight	integer	•	
text	string	•	•

AssetManager Attribute	Type	R	W
asset[n]	object reference	•	
count	integer	•	

System Attribute	Type	R	W
ejectCD	boolean		•
gameMode	boolean		•
masterVolume	floating point	•	•
monitorBitDepth	integer	•	•
supportsBitDepth[n]	boolean	•	
volumelsMounted	boolean	•	
volumeName	string		•

WorldManager Attribute	Type	R	W
autoScreenFade	boolean		•
autoSharedScene	boolean		•
clearReturnList	boolean		•
clickCount	integer	•	
combineRedraws	boolean	•	•
currentScene	object reference	•	•
cursorElement	object reference		•
globalOffset	point	•	•
macSndBufferSize	integer	•	•
postponeRedraws	boolean		•
refreshCursor	boolean		•
winSndBufferSize	integer	•	•

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