

MathScript

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	<i>TITLE :</i> MathScript		
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Chapter 1

MathScript

1.1 ARexx Commands

ARexx Commands

MathScript has the following list of ARexx commands:

- Clear
- Export
- GetARexxPrefs
- GetBoundingBox
- GetCode
- GetEPSPrefs
- GetFontPrefs
- GetGeneralPrefs
- GetIFFPrefs
- GetStyle
- GetSystemPrefs
- GetTIFFPrefs
- GetZoom
- Import
- ImportClip
- InsertCode
- LoadPrefs
- New
- Open
- RequestFile
- Save
- SaveAs
- SavePrefs
- SavePrefsAs
- ScreenToFront
- SetARexxPrefs
- SetCode
- SetContents
- SetEPSPrefs
- SetFontPrefs
- SetGeneralPrefs
- SetIFFPrefs
- SetStyle
- SetSystemPrefs

SetTIFFPrefs
SetZoom

1.2 Clear

Clear

NAME

Clear - Clear the current formula

SYNOPSIS

Clear

FUNCTION

The contents of the current Project Window will be erased

SEE ALSO

New

1.3 Export

Export

NAME

Export - Export the current formula

SYNOPSIS

Export FORMAT/A,FILE,FORCE/S

FUNCTION

Export the current formula as a graphics file

INPUTS

FORMAT - File format of the exported file. One of the following:

"EPS" - Encapsulated PostScript
"IFF" - IFF-ILBM

```
        "TIFF" - TIFF
FILE    - The name of the file. If none is specified a file
          requester will be opened.
FORCE   - Surpress any warnings

SEE ALSO
    Import
```

1.4 GetARExxPrefs

GetARExxPrefs

NAME

GetARExxPrefs - Get the current ARExx settings

SYNOPSIS

GetARExxPrefs STEM/A

FUNCTION

Read the current ARExx settings.
The settings will be written to the given stem variable.
The following stem items are available:

stem.F.<n> - Script name assigned to F<n>. n=1-10

INPUTS

STEM - Name of a stem variable the settings items will be
written to

EXAMPLE

```
/* Show all Function Keys */
```

```
GetARExxPrefs arexx
```

```
Do i=1 To 10
    say "F"i": "arexx.f.i
End
```

SEE ALSO

SetARExxPrefs

1.5 GetBoundingBox

GetBoundingBox

NAME

GetBoundingBox - Get the size of the current formula

SYNOPSIS

GetBoundingBox STEM/A

FUNCTION

Return the size of the current formula specified with a BoundingBox structure.

INPUTS

STEM - Name of a stem variable

RESULT

STEM - stem.llx - x coordinate of the lower left corner
stem.lly - y coordinate of the lower left corner
stem.urx - x coordinate of the upper right corner
stem.ury - y coordinate of the upper right corner

NOTE

The coordinates of the lower left corner are 0 or negative,
the coordinates of the upper right corner are 0 or positive.

EXAMPLE

```
/* Compute the width and height of the formula */  
  
GetBoundingBox bbox  
  
w=bbox.urx-bbox.llx  
h=bbox.ury-bbox.lly
```

1.6 GetCode

GetCode

NAME

GetCode - Get the Formula Code

SYNOPSIS

GetCode

FUNCTION

Get the Formula Code of the current formula.

RESULT

result - The Formula Code

NOTE

The code returned will use the new syntax of MathScript 3.0 and above.

SEE ALSO

SetCode, Formula Code

1.7 GetEPSPrefs

GetEPSPrefs

NAME

GetEPSPrefs - Read the current EPS settings

SYNOPSIS

GetEPSPrefs STEM/A

FUNCTION

Read the current EPS settings.
The settings will be written to the given stem variable.
The following stem items are available:

stem.includefonts	- Include Fonts? "YES" or "NO"
stem.preview	- Generate Preivew? "YES" or "NO"
stem.xdpi	- Preview x dpi
stem.ydpi	- Preview y dpi

INPUTS

STEM - Name of a stem variable the settings items will be written to

SEE ALSO

SetEPSPrefs

1.8 GetFontPrefs

GetFontPrefs

NAME

GetFontPrefs - Read the current font settings

SYNOPSIS

GetFontPrefs STEM/A

FUNCTION

Read the current Font settings.
The settings will be written to the given stem variable.
The following stem items are available:

stem.var	- font name used for variables
stem.func	- font name used for functions
stem.text	- font name used for text
stem.greek	- font name used for greek characters
stem.number	- font name used for numbers
stem.symbol	- font name used for symbols
stem.extra1	- font name used for special purposes
stem.extra2	- font name used for special purposes

INPUTS

STEM - Name of a stem variable the settings items will be written to

SEE ALSO

SetFontPrefs

1.9 GetGeneralPrefs

GetGeneralPrefs

NAME

GetGeneralPrefs - Read the current General settings

SYNOPSIS

GetGeneralPrefs STEM/A

FUNCTION

Read the current General settings.
The settings will be written to the given stem variable.
The following stem items are available:

stem.fontsize	- Font size in pt
stem.xdpi	- Display x dpi
stem.ydpi	- Display y dpi

INPUTS

STEM - Name of a stem variable the settings items will be written to

SEE ALSO

SetGeneralPrefs

1.10 GetIFFPrefs

GetIFFPrefs

NAME

GetIFFPrefs - Read the current IFF settings

SYNOPSIS

GetIFFPrefs STEM/A

FUNCTION

Read the current IFF settings.
The settings will be written to the given stem variable.
The following stem items are available:

stem.xdpi - x dpi resolution
stem.ydpi - y dpi resolution

INPUTS

STEM - Name of a stem variable

SEE ALSO

SetIFFPrefs

1.11 GetStyle

GetStyle

NAME

GetStyle - Get the current style

SYNOPSIS

GetStyle

FUNCTION

Read the current style as set with the Style Selector.
The result can be one of the following key words:

- Math
- Text
- Greek
- Variable
- Function
- Extra1
- Extra2

RESULT

result - Name of the current style

SEE ALSO

SetStyle

1.12 GetSystemPrefs

GetSystemPrefs

NAME

GetSystemPrefs - Read the current system settings

SYNOPSIS

GetSystemPrefs STEM/A

FUNCTION

Read the current System settings.
The settings will be written to the given stem variable.
The following stem items are available:

stem.path - the default path
stem.icons - Save icons? "YES" or "NO"

INPUTS

STEM - Name of a stem variable

SEE ALSO

SetSystemPrefs

1.13 GetTIFFPrefs

GetTIFFPrefs

NAME

GetTIFFPrefs - Read the current TIFF settings

SYNOPSIS

GetTIFFPrefs STEM/A

FUNCTION

Read the current TIFF settings.
The settings will be written to the given stem variable.
The following stem items are available:

stem.xdpi - x dpi value

```
stem.ydpi - y dpi value
```

INPUTS

```
STEM - Name of a stem variable
```

SEE ALSO

```
SetTIFFPrefs
```

1.14 GetZoom

GetZoom

NAME

```
GetZoom - Get the current magnification level
```

SYNOPSIS

```
GetZoom
```

FUNCTION

```
Get the current magnification level as set in the Toolbar's  
Zoom gadget
```

RESULT

```
result - zoom value (in %)
```

EXAMPLE

```
/* double the zoom value */
```

```
GetZoom
```

```
SetZoom result*2
```

SEE ALSO

```
SetZoom
```

1.15 Import

Import

NAME

```
Import - Import a file
```

SYNOPSIS

```
Import FILE, FORCE/S
```

FUNCTION

Import the specified file. If no file is given a file requester will be opened.

INPUTS

FILE - Name of the file to be imported
FORCE - Surpress any warnings

SEE ALSO

ImportClip, Export

1.16 ImportClip

ImportClip

NAME

ImportClip - Import the contents of a clipboard unit

SYNOPSIS

ImportClip UNIT, FORCE/S

FUNCTION

Import the contents of the specified clipboard unit. If a MathScript graphic file has been posted to the clipboard by another application, you can load it back directly with this command.

INPUTS

UNIT - Clipboard unit number. Defaults to 0
FORCE - Surpress any warnings

SEE ALSO

Import, Export

1.17 InsertCode

InsertCode

NAME

InsertCode - Insert formula code

SYNOPSIS

InsertCode CODE/A/F

FUNCTION

Insert the given formula code at the current cursor position.

INPUTS

CODE - Formula code

NOTE

Due to the way the argument parsing works, the first appearance of a '=' in the formula code can be skipped. To circumvent this, use double quotes like shown below.

EXAMPLE

```
InsertCode ' "f(x)=x^2" '
```

1.18 LoadPrefs

LoadPrefs**NAME**

LoadPrefs - Load a settings file

SYNOPSIS

LoadPrefs FILE

FUNCTION

Load a settings file. If none is specified a file requester will be opened.

INPUTS

FILE - Name of a settings file

SEE ALSO

SavePrefs, SavePrefsAs

1.19 New

New**NAME**

New - Open a new project

SYNOPSIS

New

FUNCTION

Closes the current project and opens a new one. Corresponds to the menu item Project/New.

1.20 Open

Open

NAME

Open - Load a formula file

SYNOPSIS

Open FILE, FORCE/S

FUNCTION

Open a saved formula project. If no file name is specified, a file requester will be opened.

INPUTS

FILE - Name of a formula file
FORCE - Surpress any warnings

1.21 RequestFile

RequestFile

NAME

RequestFile - Open an ASL file requester

SYNOPSIS

RequestFile TITLE/K, PATTERN/K

FUNCTION

Open an ASL file requester.

INPUTS

TITLE - Title of the requester
PATTERN - File pattern

RESULT

result - The full file name chosen by the user

1.22 Save

Save

NAME

Save - Save the current project

SYNOPSIS

Save FORCE/S

FUNCTION

Saves the current project to the current project file. If there is no such, a file requester will be opened.

INPUTS

FORCE - Surpress any warnings

SEE ALSO

SaveAs

1.23 SaveAs

SaveAs

NAME

SaveAs - Save the current project

SYNOPSIS

SaveAs FILE, FORCE/S

FUNCTION

Saves the current project to the specified file. If no file name is given a file requester will be opened.

INPUTS

FILE - Name of the file

FORCE - Surpress any warnings

SEE ALSO

Save

1.24 SavePrefs

SavePrefs

NAME

SavePrefs - Save the current settings

SYNOPSIS

SavePrefs

FUNCTION

Save the current settings as the default settings.

SEE ALSO

SavePrefsAs

1.25 SavePrefsAs

SavePrefsAs

NAME

SavePrefsAs _ Save the current settings

SYNOPSIS

SavePrefsAs FILE, FORCE/S

FUNCTION

Save the current settings to the specified file. If no one is given a file requester will be opened.

INPUTS

FILE - Name of the settings file

FORCE - Surpress any warnings

SEE ALSO

SavePrefs, LoadPrefs

1.26 ScreenToFront

ScreenToFront

NAME

ScreenToFront - Make MathScript's screen the frontmost

SYNOPSIS

ScreenToFront

FUNCTION

The screen MathScript is running on will be moved to the front.

1.27 SetARexxPrefs

SetARexxPrefs

NAME

SetARexxPrefs - Set the current ARexx settings

SYNOPSIS

SetARexxPrefs ITEM/K,STEM/A

FUNCTION

Set the current ARexx settings.

If a specific settings item is given with ITEM, STEM is the value.

Otherwise if no item is specified, STEM is considered the name of a stem variable that will be used to read all settings items from.

The following items are available:

stem.F.<n> - Script name assigned to F<n>. n=1-10

INPUTS

ITEM - Name of a settings item

STEM - Name of a stem variable or the item's value

EXAMPLE

see SetGeneralPrefs

SEE ALSO

GetARexxPrefs

1.28 SetCode

SetCode

NAME

SetCode - Set the current formula

SYNOPSIS

SetCode CODE/A/F

FUNCTION

Set the current formula to the specified formula description.

INPUTS

CODE - Formula code

NOTE

Due to the way the argument parsing works, the first appearance of a '=' in the formula code can be skipped. To circumvent this, use double quotes like shown below.

EXAMPLE

SetCode ' "f(x)=1/2x^2" '

SEE ALSO

InsertCode, GetCode

1.29 SetContents

SetContents

NAME

SetContents - Set the current formula

SYNOPSIS

SetContents CONTENTS/A/F

FUNCTION

Set the current formula to the specified formula description. The formula description must use the MathScript 2.x syntax.

INPUTS

CONTENTS - Formula Code (MathScript 2.x)

NOTE

THIS COMMAND IS OBSOLETE! USE SETCODE INSTEAD!!!

SEE ALSO

SetCode

1.30 SetEPSPrefs

SetEPSPrefs

NAME

SetEPSPrefs - Set the current EPS settings

SYNOPSIS

SetEPSPrefs ITEM/K,STEM/A

FUNCTION

Set the current EPS settings.

If a specific settings item is given with ITEM, STEM is the value.

Otherwise if no item is specified, STEM is considered the name of a stem variable that will be used to read all settings items from.

The following items are available:

stem.includefonts	- Include Fonts? "YES" or "NO"
stem.preview	- Generate Preivew? "YES" or "NO"
stem.xdpi	- Preview x dpi
stem.ydpi	- Preview y dpi

INPUTS

ITEM - Name of a settings item

STEM - Name of a stem variable or the item's value

EXAMPLE

see SetGeneralPrefs

SEE ALSO

GetEPSPrefs

1.31 SetFontPrefs

SetFontPrefs

NAME

SetFontPrefs - Set the current Font settings

SYNOPSIS

SetFontPrefs ITEM/K,STEM/A

FUNCTION

Set the current Font settings.

If a specific settings item is given with ITEM, STEM is the value.

Otherwise if no item is specified, STEM is considered the name of a stem variable that will be used to read all settings items from.

The following items are available:

stem.var	- font name used for variables
stem.func	- font name used for functions
stem.text	- font name used for text
stem.greek	- font name used for greek characters
stem.number	- font name used for numbers
stem.symbol	- font name used for symbols
stem.extra1	- font name used for special purposes
stem.extra2	- font name used for special purposes

INPUTS

ITEM - Name of a settings item

STEM - Name of a stem variable or the item's value

EXAMPLE

```
see SetGeneralPrefs
```

SEE ALSO

```
GetFontPrefs
```

1.32 SetGeneralPrefs

SetGeneralPrefs

NAME

SetGeneralPrefs - Set the current General settings

SYNOPSIS

```
SetGeneralPrefs ITEM/K,STEM/A
```

FUNCTION

Set the current General settings.

If a specific settings item is given with ITEM, STEM is the value.

Otherwise if no item is specified, STEM is considered the name of a stem variable that will be used to read all settings items from.

The following items are available:

stem.fontsize	- Font size in pt
stem.xdpi	- Display x dpi
stem.ydpi	- Display y dpi

INPUTS

ITEM - Name of a settings item
STEM - Name of a stem variable or the item's value

EXAMPLE

```
/* Set the current font size to 18pt */  
  
GetGeneralPrefs general  
  
general.fontsize=18  
  
SetGeneralPrefs general  
  
/* If we only have to change one item we can do it also this  
   way: */  
  
SetGeneralPrefs ITEM=fontsize 18
```

SEE ALSO

GetGeneralPrefs

1.33 SetIFFPrefs

SetIFFPrefs

NAME

SetIFFPrefs - Set the current IFF settings

SYNOPSIS

SetIFFPrefs ITEM/K,STEM/A

FUNCTION

Set the current IFF settings.
If a specific settings item is given with ITEM, STEM is the value.
Otherwise if no item is specified, STEM is considered the name of a stem variable that will be used to read all settings items from.
The following items are available:

stem.xdpi - x dpi resolution
stem.ydpi - y dpi resolution

INPUTS

ITEM - Name of a settings item
STEM - Name of a stem variable or the item's value

EXAMPLE

see SetGeneralPrefs

SEE ALSO
GetIFFPrefs

1.34 SetStyle

SetStyle

NAME

SetStyle - Set the current style

SYNOPSIS

SetStyle STYLE/A

FUNCTION

Set the current style to one of the following values:

- Math
- Text
- Greek
- Variable
- Function
- Extra1
- Extra2

INPUTS

STYLE - Name of the style

SEE ALSO
GetStyle

1.35 SetSystemPrefs

SetSystemPrefs

NAME

SetSystemPrefs - Set the current System settings

SYNOPSIS

SetSystemPrefs ITEM/K,STEM/A

FUNCTION

Set the current System settings.
If a specific settings item is given with ITEM, STEM is the value.

Otherwise if no item is specified, STEM is considered the name of a stem variable that will be used to read all settings items from.

The following items are available:

- stem.path - the default path
- stem.icons - Save icons? "YES" or "NO"

INPUTS

- ITEM - Name of a settings item
- STEM - Name of a stem variable or the item's value

EXAMPLE

see SetGeneralPrefs

SEE ALSO

GetSystemPrefs

1.36 SetTIFFPrefs

SetTIFFPrefs

NAME

SetTIFFPrefs - Set the current TIFF settings

SYNOPSIS

SetTIFFPrefs ITEM/K,STEM/A

FUNCTION

Set the current TIFF settings.

If a specific settings item is given with ITEM, STEM is the value.

Otherwise if no item is specified, STEM is considered the name of a stem variable that will be used to read all settings items from.

The following items are available:

- stem.xdpi - x dpi resolution
- stem.ydpi - y dpi resolution

INPUTS

- ITEM - Name of a settings item
- STEM - Name of a stem variable or the item's value

EXAMPLE

see SetGeneralPrefs

SEE ALSO

GetTIFFPrefs

1.37 SetZoom

SetZoom

NAME

SetZoom - Set the current magnification level

SYNOPSIS

SetZoom ZOOM/A/N

FUNCTION

Set the current magnification level.

INPUTS

ZOOM - Zoom level (in %)

SEE ALSO

GetZoom