

**ARexx**

<b>COLLABORATORS</b>
----------------------

	<i>TITLE :</i> ARexx		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		May 31, 2025	

<b>REVISION HISTORY</b>
-------------------------

NUMBER	DATE	DESCRIPTION	NAME

# Contents

<b>1</b>	<b>ARexx</b>	<b>1</b>
1.1	ARexx.guide	1
1.2	ARexx.guide/Overview	2
1.3	ARexx.guide/Command Templates	3
1.4	ARexx.guide/Return Values	4
1.5	ARexx.guide/Error Checking	5
1.6	ARexx.guide/ATTRS_FILLCOLOUR_SET	6
1.7	ARexx.guide/ATTRS_FILLFILL_SET	7
1.8	ARexx.guide/ATTRS_GET	8
1.9	ARexx.guide/ATTRS_PENCOLOUR_SET	10
1.10	ARexx.guide/ATTRS_PENFILL_SET	11
1.11	ARexx.guide/ATTRS_PENSTYLE_SET	12
1.12	ARexx.guide/ATTRS_TEXT_SET	14
1.13	ARexx.guide/COPY	15
1.14	ARexx.guide/CREATE_ARC	16
1.15	ARexx.guide/CREATE_BEZIER	17
1.16	ARexx.guide/CREATE_ELLIPSE	19
1.17	ARexx.guide/CREATE_FREEHAND	20
1.18	ARexx.guide/CREATE_LINE	21
1.19	ARexx.guide/CREATE_RECT	21
1.20	ARexx.guide/CREATE_RND	22
1.21	ARexx.guide/CREATE_TEXT	24
1.22	ARexx.guide/CUT	24
1.23	ARexx.guide/MENU	25
1.24	ARexx.guide/OBJECT_ALIGN	26
1.25	ARexx.guide/OBJECT_CLONE	29
1.26	ARexx.guide/OBJECT_CONVERTTOBEZIER	30
1.27	ARexx.guide/OBJECT_DELETE	30
1.28	ARexx.guide/OBJECT_DESELECT	31
1.29	ARexx.guide/OBJECT_GROUP	32

---

1.30	ARexx.guide/OBJECT_JOIN . . . . .	33
1.31	ARexx.guide/OBJECT_MAKE_COMPOUND . . . . .	33
1.32	ARexx.guide/OBJECT_MOVE . . . . .	34
1.33	ARexx.guide/OBJECT_ROTATE . . . . .	35
1.34	ARexx.guide/OBJECT_SCALE . . . . .	36
1.35	ARexx.guide/OBJECT_SELECT . . . . .	37
1.36	ARexx.guide/OBJECT_SPECS_GET . . . . .	38
1.37	ARexx.guide/OBJECT_SPLIT_COMPOUND . . . . .	39
1.38	ARexx.guide/OBJECT_TOBACK . . . . .	40
1.39	ARexx.guide/OBJECT_TOFRONT . . . . .	41
1.40	ARexx.guide/OBJECT_UNGROUP . . . . .	42
1.41	ARexx.guide/PAGE_SPECS_GET . . . . .	43
1.42	ARexx.guide/PASTE . . . . .	44
1.43	ARexx.guide/PROJECT_CLOSE . . . . .	45
1.44	ARexx.guide/PROJECT_LOCK . . . . .	45
1.45	ARexx.guide/PROJECT_NEW . . . . .	46
1.46	ARexx.guide/PROJECT_OPEN . . . . .	47
1.47	ARexx.guide/PROJECT_PLACE . . . . .	48
1.48	ARexx.guide/PROJECT_SAVE . . . . .	49
1.49	ARexx.guide/PROJECT_UNLOCK . . . . .	50
1.50	ARexx.guide/QUIT . . . . .	51
1.51	ARexx.guide/REDO . . . . .	52
1.52	ARexx.guide/REDRAW_OFF . . . . .	52
1.53	ARexx.guide/REDRAW_ON . . . . .	53
1.54	ARexx.guide/REQ_FILE . . . . .	54
1.55	ARexx.guide/REQ_MESSAGE . . . . .	55
1.56	ARexx.guide/SCRIPT . . . . .	57
1.57	ARexx.guide/UNDO . . . . .	58

---

# Chapter 1

## ARexx

### 1.1 ARexx.guide

Welcome to the DrawStudio ARexx manual. This gives a detailed description of the ARexx commands available in the program.

This document applies to version 1.0.x, written on 3rd November 1996, Copyright (C) 1995,1996 Graham Dean, Andy Dean.

Overview	ARexx and DrawStudio
Command Templates	How to understand the template notation
Return Values	How to use the values returned
Error Checking	Trapping errors in a running script
ATTRS_FILLCOLOUR_SET	Set objects fill colour
ATTRS_FILLFILL_SET	Set objects fill type
ATTRS_GET	Get information on the objects' attributes
ATTRS_PENCOLOUR_SET	Set objects pen colour
ATTRS_PENFILL_SET	Set object pen type
ATTRS_PENSTYLE_SET	Set object pen ends, joins and thickness
ATTRS_TEXT_SET	Set text size, style and alignment
COPY	Copy objects to the clipboard
CREATE_ARC	Create an arc object
CREATE_BEZIER	Create a Bezier object
CREATE_ELLIPSE	Create an ellipse object
CREATE_FREEHAND	Create a freehand object
CREATE_LINE	Create a line object
CREATE_RECT	Create a rectangle object
CREATE_RND	Create a rounded rectangle object
CREATE_TEXT	Create a text object
CUT	Cut objects into the clipboard
MENU	Activate a menu item
OBJECT_ALIGN	Align and distribute objects
OBJECT_CLONE	Clone objects
OBJECT_CONVERTTOBEZIER	Convert objects to Bezier objects
OBJECT_DELETE	Delete objects from page
OBJECT_DESELECT	Deselect selected objects
OBJECT_GROUP	Group objects into a single object
OBJECT_JOIN	Join objects into a single object
OBJECT_MAKE_COMPOUND	Make objects a single compound object

OBJECT_MOVE	Move objects on the page
OBJECT_ROTATE	Rotate objects
OBJECT_SCALE	Resizes the objects
OBJECT_SELECT	Selects the named object
OBJECT_SPECS_GET	Gets information on the selected object(s)
OBJECT_SPLIT_COMPOUND	Splits a compound object into Beziers
OBJECT_TOBACK	Move the objects to the back of the page
OBJECT_TOFRONT	Move the objects to the front of the page
OBJECT_UNGROUP	Ungroups objects into individual objects
PAGE_SPECS_GET	Gets information on the current page
PASTE	Pastes objects from the clipboard
PROJECT_CLOSE	Closes the current project
PROJECT_LOCK	Locks the project before executing ARexx commands
PROJECT_NEW	Creates a new project
PROJECT_OPEN	Opens a project from disk
PROJECT_PLACE	Imports a graphics to place on the page
PROJECT_SAVE	Saves the project to disk
PROJECT_UNLOCK	Removes the GUI lock after executing ARexx commands
QUIT	Exits the DrawStudio program
REDO	Redoes the last undone command
REDRAW_OFF	Turns off the redraw for faster ARexx execution
REDRAW_ON	Turns on the redraw and redraws the project
REQ_FILE	Opens a general purpose file requester
REQ_MESSAGE	Opens a general porpose message requester
SCRIPT	Runs a named script
UNDO	Undos the last action

## 1.2 ARexx.guide/Overview

### Overview

\*\*\*\*\*

This online manual provides detailed information on the ARexx commands available to you when using DrawStudio. ARexx has 3 main uses in DrawStudio:

1. ARexx can be used to automate repetitive tasks that usually require lots of menu accesses. Scripts can be built up from many MENU commands, which is a level of programming that can be understood by even the novice programmer.
2. Complex scripts can be generated to perform effects and draw complex mathematical shapes.
3. ARexx can be used to transfer information between DrawStudio and other ARexx-aware programs.

The commands listed here show the command name as well as any input parameters and any values returned. Examples are also given showing the commands in use.

---

## 1.3 ARexx.guide/Command Templates

### Command Templates

\*\*\*\*\*

The parameters passed to the ARexx commands closely follow the Amiga's style guidelines. The parsing of the arguments follows the standard template format described below.

Commands are always of the form:

```
command [options]
```

The command may be something like PROJECT\_OPEN or OBJECT\_SCALE and the options may be filenames, numbers etc... A typical command template may look like:

```
OBJECT_ROTATE ANGLE/A,CX,CY
```

The commands and options are not case sensitive, therefore 'OBJECT\_ROTATE', 'Object\_Rotate' or 'object\_rotate' can be used to rotate an object. The options after the command name are separated by commas, and are named (e.g. ANGLE or CX are option names). After the name, follows an optional modifier (e.g. /A or /S are modifiers) which describes what type of information the option specifies.

When using the command, the option names may be omitted if the parameters for the command are given in the same order as the options in the template, but for clarity it is recommended that the option names be used.

The following modifiers are used:

#### No modifier

If the option has no modifier, the option is expecting a string or a floating point number. Strings are lines of text with no spaces; to use a string with a space, place the string in double-quotes ("). Floating point numbers are values with a (optional) decimal place (e.g. 15.7, 9.462 or 5).

Distance and length value can be given length specifiers. For example, you may move an object 1 inch to the left and 5 cm down with the command:

```
OBJECT_MOVE '1in' '5cm'
```

If no units are given, points are assumed.

#### Multiple strings (/M)

Many strings or floating point numbers can be specified if an option uses this modifier.

#### Numeric (/N)

Numeric options allow both positive and negative integers. Decimal points are not allowed in a numeric argument.

---

#### Boolean (/S)

Some options can be specified to "switch" that option on. By leaving the option out, the option is switched off.

#### Keyword (/K)

A keyword option shows that the option name must be used to set this option.

#### Always (/A)

This option must always be included in this command.

In practice, it soon becomes very easy to interpret command templates - some examples with explanations are given below:

```
OBJECT_ROTATE ANGLE/A,CX,CY
```

The command 'OBJECT\_ROTATE' is used to rotate the selected objects in DrawStudio. OBJECT\_ROTATE requires an angle of rotation (in degrees) and an optional centre of rotation. The following are valid OBJECT\_ROTATE commands:

The following would rotate all selected objects by 22.5 degrees clockwise around their centre:

```
OBJECT_ROTATE 22.5
```

The following would rotate the currently selected objects by 50 degrees, anticlockwise, around the top left of the page:

```
OBJECT_ROTATE 50 0 0
```

## 1.4 ARexx.guide/Return Values

### Return Values

\*\*\*\*\*

The return values for the ARexx commands are specified in the same notation as the input parameters, although the types of returned values is more limited than the input parameter types. In order for results to be returned from ARexx commands, it is essential that the line:

```
options results
```

be placed near the start of the ARexx script.

Commands may return either strings, numbers or arrays of either. By default, all ARexx commands return their values in a variable called "RESULT". For example, the following call to the CREATE\_TEXT command would return the name of the created text object:

```
CREATE_TEXT 100.0 200.0 '"Hello world"'
```

If the user wishes to return the result in another variable other than RESULT, they may specify the VAR keyword. For example, the

---



following would perform the same action as above, only putting the result in the variable called "TEXTNAME"

```
CREATE TEXT 100.0 200.0 '"Hello world"' VAR 'FULLNAME'
```

When lengths or distances are returned, the value is always given in points.

## 1.5 ARexx.guide/Error Checking

### Error Checking

\*\*\*\*\*

DrawStudio uses the standard ARexx method of returning errors, with a further extension.

Whenever a command is executed, a variable called "RC" has its value set by ARexx. If the command executed normally, RC is set to zero. If any failure happened, RC is set to either 5 (warning), 10 (failure) or 20 (serious failure).

DrawStudio also sets the value of a further variable called "RC2", which either contains a text description of the reason for failure or a standard AmigaDos error code.

A description string is returned in RC2 if a failure occurs within the execution of a command. RC2 will be an AmigaDos error number if there is an error with the command syntax (e.g. mis-spelled command name or missing quotes).

If, for example the user was to try to use the REQ\_MESSAGE command and the user cancelled the requester, the following would be returned:

```
RC = 10
RC2 = "REQ_MESSAGE; User cancelled"
```

If the user tried to open the requester with the command:

```
REQ_MESSAGE
```

the following values would be set:

```
RC = 20
RC2 = 236
```

where AmigaDos error 236 represents 'not implemented', i.e. unknown command. The default blank script template will convert the most common likely AmigaDos error codes into description strings (see the Amiga's AmigaDos manual for a full description of AmigaDos errors).

By default, the blank script template turns on automatic error checking. The line:

```
signal on error
```

---

tells DrawStudio to jump to the ERROR: label whenever a command fails. The blank script then puts up a requester showing the error.

The user may wish to turn off the automatic error checking to perform error checking themselves. This way, you can trap the error and continue processing sensibly afterwards.

```
/* Turn off automatic error checking */

signal off error

/* Open the requester */

OBJECT_MOVE 10.0 50.0

/* Check for the error condition */

if RC ~= 0 then do
    REQ_MESSAGE TEXT "An error occurred (probably' ||,
        'no objects selected)'"
end
else do
    REQ_MESSAGE TEXT "Objects moved"
end
```

## 1.6 ARexx.guide/ATTRS\_FILLCOLOUR\_SET

ATTRS\_FILLCOLOUR\_SET  
\*\*\*\*\*

### Synopsis

Allows you to change the current solid fill colour of the selected objects.

Parameters Template  
COLOUR/M/N

Return Template  
None

Parameters  
COLOUR/M/N  
Three RGB values plus one optionally opacity value to set the solid colour of the object's fill. The RGB values are between 0 and 255 and the opacity value is between 0 and 100.

Returns  
Nothing.

Errors  
rc = 0 if operation was successful.  
  
rc = 10 if the operation failed for any reason, rc2 will contain a

string describing the problem.

#### Example

The following turns the object fill of all the currently selected to red:

```
ATTRS_FILLCOLOUR_SET 255 0 0
```

The following set the selected objects' fill to 20 percent opaque magenta:

```
ATTRS_FILLCOLOUR_SET 255 0 255 20
```

#### Known bugs

None.

See also...

ATTRS\_FILLFILL\_SET

## 1.7 ARexx.guide/ATTRS\_FILLFILL\_SET

ATTRS\_FILLFILL\_SET

\*\*\*\*\*

#### Synopsis

Allows you to change the current fill type of the selected objects.

#### Parameters Template

TYPE, NAME

#### Return Template

None

#### Parameters

TYPE

This allows you to change the object fill type of the selected objects to:

- \* None; the objects become unfilled.
- \* Solid; the objects are filled with a solid colour.
- \* Pattern; the objects are filled with a simple, repeating pattern.
- \* Gradient; the objects are filled with a colour gradient.
- \* Bitmap; the objects are filled with a bitmap.

In every case except "None", a name must also be provided to tell DrawStudio which particular fill of the chosen type should be used.

NAME

---

The name of the particular fill to use with the chosen type.  
For example, if you chose a solid fill, this would be the  
name of a particular colour in the colour list.

#### Returns

Nothing.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a  
string describing the problem.

#### Example

The following removes an object fills from the selected objects:

```
ATTRS_FILLFILL_SET "None"
```

The following turns the object fill of all the currently selected  
to solid red:

```
ATTRS_FILLFILL_SET "Solid" "Pure Red"
```

This would fill all selected objects with a brick pattern, if the  
default patterns are in use:

```
ATTRS_FILLFILL_SET "Pattern" "PATTERN.H"
```

#### Known bugs

None.

See also...

ATTRS\_FILLCOLOUR\_SET

## 1.8 ARexx.guide/ATTRS\_GET

ATTRS\_GET

\*\*\*\*\*

#### Synopsis

Returns information on the current object's attributes. Only works  
if one object is selected.

#### Parameters Template

None

#### Return Template

PENTYPE, FILLTYPE, PENNAME, FILLNAME, START, END, JOIN, THICKNESS

#### Parameters

None.

#### Returns

PENTYPE

The type of colouring used for the object's pen. This can be of type:

- \* None
- \* Solid
- \* Pattern
- \* Gradient
- \* Bitmap

#### FILLTYPE

The type of colouring used for the object's fill. All the above fill types are available.

#### PENNAME

The name of the particular colour type for the object's pen. If the pen is not filled, the PENNAME is always "None". For pattern, gradient and bitmap fills the PENNAME is the name of the appropriate fill where known, otherwise it is "Unknown". Solid colour fills also return the name of the colour where known, or

"RGB R G B O"

when the colour name is unknown ("R" = red value, "G" = green value, "B" = blue value and "O" = opacity value).

#### FILLNAME

The name of the particular colour type for the object's fill, as described above.

#### START

The name of the line start shape. These are labelled "LINESTART.A", "LINESTART.B", etc... taking the order from the order found in the linestart pop-up or the attributes requester.

#### END

The name of the line end shape, named as above, only as "LINEEND.A" etc...

#### JOIN

The name of the line joins used in Bezier objects. This can be of type:

- \* Mitre
- \* Bevel
- \* Round

#### DASH

The name of the line dash pattern. These are labelled "DASH.A", "DASH.B", etc... taking order from the order found

---

in the dash pop-up or the attributes requester.

#### THICKNESS

The thickness of the line. The value is a floating point and given in points.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following removes an object fills from the selected objects:

```
ATTRS_FILLFILL_SET "None"
```

The following turns the object fill of all the currently selected to solid red:

```
ATTRS_FILLFILL_SET "Solid" "Pure Red"
```

This would fill all selected objects with a brick pattern, if the default patterns are in use:

```
ATTRS_FILLFILL_SET "Pattern" "PATTERN.H"
```

#### Known bugs

None.

See also...

ATTRS\_FILLCOLOUR\_SET

## 1.9 ARexx.guide/ATTRS\_PENCOLOUR\_SET

ATTRS\_PENCOLOUR\_SET

\*\*\*\*\*

#### Synopsis

Allows you to change the current solid pen colour of the selected objects.

#### Parameters Template

COLOUR/M/N

#### Return Template

None

#### Parameters

COLOUR/M/N

Three RGB values plus one optionally opacity value to set the solid colour of the object's pen. The RGB values are between 0 and 255 and the opacity value is between 0 and 100.

#### Returns

Nothing.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following turns the object fill of all the currently selected to green:

```
ATTRS_PENCOLOUR_SET 0 255 0
```

The following sets all selected objects' fill to 50 percent opaque blue:

```
ATTRS_PENCOLOUR_SET 0 255 0 50
```

#### Known bugs

None.

#### See also...

ATTRS\_PENFILL\_SET

## 1.10 ARexx.guide/ATTRS\_PENFILL\_SET

ATTRS\_PENFILL\_SET

\*\*\*\*\*

#### Synopsis

Allows you to change the current pen fill type of the selected objects.

#### Parameters Template

TYPE, NAME

#### Return Template

None

#### Parameters

TYPE

This allows you to change the object pen fill type of the selected objects to:

- \* None; the objects have no visible pen.
- \* Solid; the objects are use a solid colour for their pen.
- \* Pattern; the objects use a simple, repeating pattern for their pen.
- \* Gradient; the objects pen is drawn with a colour

gradient.

\* Bitmap; the objects use a bitmap to draw the pen.

In every case except "None", a name must also be provided to tell DrawStudio which particular pen of the chosen type should be used.

#### NAME

The name of the particular fill to use with the chosen type. For example, if you chose a solid pen, this would be the name of a particular colour in the colour list.

#### Returns

Nothing.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following removes the pen from the selected objects:

```
ATTRS_PENFILL_SET "None"
```

The following turns the pen of all the currently selected to solid yellow:

```
ATTRS_PENFILL_SET "Solid" "Pure Yellow"
```

This would draw all selected objects' pens with a checked pattern, if the default patterns are in use:

```
ATTRS_PENFILL_SET "Pattern" "PATTERN.P"
```

#### Known bugs

None.

See also...

ATTRS\_PENCOLOUR\_SET

## 1.11 ARexx.guide/ATTRS\_PENSTYLE\_SET

ATTRS\_PENSTYLE\_SET

\*\*\*\*\*

#### Synopsis

Allows you to change the current pen start, end, join and thickness.

#### Parameters Template

START, END, JOIN, THICKNESS

---



## Return Template

None

## Parameters

### START

The name of the line start to use. Allowed values are "LINESTART.A", "LINESTART.B", etc... or "None" for a flat start. If no value is given the current line's start is not changed.

### END

The name of the line end to use. Allowed values are "LINEEND.A", "LINEEND.B", etc... or "None" for a flat start. If no value is given the current line's end is not changed.

### JOIN

The name of the line join to use. Allowed values are "Miter", "Bevel" or "Round". If no value is given the current line's join is not changed.

### THICKNESS

The thickness of the line. By default, the value is given in points. If no value is given, the current line's thickness remains unchanged.

## Returns

Nothing.

## Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

## Example

The following adds a simple arrowhead the selected objects:

```
ATTRS_PENSTYLE_SET "PATTERN.B"
```

The following changes the join of connected line (i.e. Bezier objects) to rounded joins:

```
ATTRS_PENSTYLE_SET JOIN "Round"
```

This would change the line thickness of all selected objects to 5pt:

```
ATTRS_PENSTYLE_SET THICKNESS 5.0
```

This would change all selected lines to have arrows on both ends (double-arrowhead on the start) at 2mm thickness:

```
ATTRS_PENSTYLE_SET "PATTERN.J" "PATTERN.C" THICKNESS "2mm"
```

## Known bugs

None.

---

See also...

ATTRS\_PENCOLOUR\_SET

## 1.12 ARexx.guide/ATTRS\_TEXT\_SET

ATTRS\_TEXT\_SET

\*\*\*\*\*

### Synopsis

Allows you to change the style of the selected text objects.

### Parameters Template

FONT, SIZE, ALIGN

### Return Template

None

### Parameters

Any combination of parameters may be supplied, allowing you to leave certain text parameters unchanged by not specifying them in the command (for example, all text objects could be converted to 12 point text without changing their font or alignment).

#### FONT

Selects the font, by name, to be used for all the selected text objects. The font name must be identical to that used in the font requester ("Text/Font..." menu) and is case sensitive.

#### SIZE

The size, in points, for the text. Floating point values may be used to select the font size, allowing very accurate text sizing.

#### ALIGN

Selects the text alignment for the characters in the text objects. The following alignments are allowed:

- \* Left.
- \* Centre.
- \* Right.

Note that the ALIGN value has no meaning to text objects with only one line of text (i.e. without a line break or new line).

### Returns

Nothing.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following sets all the selected text objects to 12 point text, leaving the font and alignment unchanged:

```
ATTRS_TEXT_SET SIZE 12.0
```

The following changes all selected text objects to 24 point, Times, without changing alignment:

```
ATTRS_TEXT_SET "Times" 24.0
```

This would change all selected text objects to 8.5 point Courier text with right alignment:

```
ATTRS_TEXT_SET "Courier" 8.5 "Right"
```

#### Known bugs

None.

#### See also...

Nothing.

## 1.13 ARexx.guide/COPY

### COPY

\*\*\*\*

#### Synopsis

Copies the currently selected objects into the system clipboard. They may then be pasted out to elsewhere in the current project, to another DrawStudio project or to another application that understands the DrawStudio format.

See also CUT and PASTE.

#### Parameters Template

None.

#### Return Template

None.

#### Parameters

None.

#### Returns

Nothing.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a

---

string describing the problem.

#### Example

The following copies the currently selected objects to the clipboard:

```
COPY
```

#### Known bugs

None.

See also...

CUT, PASTE

## 1.14 ARexx.guide/CREATE\_ARC

CREATE\_ARC

\*\*\*\*\*

#### Synopsis

Creates an arc object. Allows you to specify its position, horizontal and vertical size as well as its start and end angles.

#### Parameters Template

X/A, Y/A, RX, RY, ANGLE1/A, ANGLE2/A

#### Return Template

NAME

#### Parameters

X/A

The horizontal (X) position on the page used for the centre of the ellipse which will form the arc. The number is a floating point value.

Y/A

The vertical (Y) position on the page used for the centre of the ellipse which will form the arc. The number is a floating point value.

RX/A

The horizontal (X) radius of the arc. The number is a floating point value.

RY/A

The vertical (Y) radius of the arc. The number is a floating point value.

ANGLE1/A

The starting angle for the arc, in degrees. The angle starts from zero degrees being vertical, and increments in a clockwise direction (e.g. 90 degrees is "3 o'clock" and 270 degrees is "9 o'clock").

---

ANGLE2/A

The end angle for the arc, in degrees.

Returns

NAME

The name of the newly created object.

Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example

The following creates an arc in the top-left corner of the page, drawing only on the page. It has a radius of 1 inch (72 points):

```
CREATE_ARC 0.0 0.0 72.0 72.0 90.0 180.0
```

Known bugs

None.

See also...

CREATE\_ELLIPSE

## 1.15 ARexx.guide/CREATE\_BEZIER

CREATE\_BEZIER

\*\*\*\*\*

Synopsis

Creates a Bezier object, consisting of Bezier curves and straight line segments. Full control is given over the creation of the object, allowing any valid shape of Bezier object to be created from ARexx.

Parameters Template

CLOSED/S, PARAMS/M/A

Return Template

NAME

Parameters

CLOSED/S

Add this switch to form a closed Bezier object; Bezier objects are open by default.

PARAMS/M/A

Parameters that describe the shape of the Bezier object consist of a list of numbers and characters - the numbers describe the location of the object points and control points and the characters are used to distinguish between line and Bezier curve sections.

---

The first 2 numbers of any Bezier object are the starting location (in points) on the page where the object is to begin.

Then follows 2 possible letters - either "L" or "B" depending on whether the following points are to describe a "L"ine section, or a "B"ezier curve.

If a line section is chosen, 2 more numbers follow which describe the coordinate value of the second point on the line. If a Bezier curve is chosen, 6 more numbers follow which describe the 2 Bezier control points and the end point of the Bezier curve (see the manual for details on how Bezier curves are described).

The object can now be ended by not specifying any more parameters, or it can be continued with another line or Bezier section by adding another "L" or "B" character and describing another section.

See the examples below to see the command in use.

#### Returns

NAME

The name of the newly created object.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following creates a straight line from the top-left of the page to 1 inch in from the left edge and 2 inches from the top edge of the page:

```
CREATE_BEZIER 0.0 0.0 L 72.0 144.0
```

The next example joins the same two points as the above example (0,0) and (72,144) with a Bezier curve:

```
CREATE_BEZIER 0.0 0.0 B 72.0 0.0 72.0 0.0 72.0 144.0
```

To create a closed object with the above curve:

```
CREATE_BEZIER CLOSED 0.0 0.0 B 72.0 0.0 72.0 0.0 72.0 144.0
```

Or we can create an open object to look similar by drawing a curve and a line:

```
CREATE_BEZIER 0.0 0.0 B 72.0 0.0 72.0 0.0 72.0 144.0,  
L 0.0 0.0
```

This creates a 2 inch (closed) square 1 inch from the top and left of the page:

```
CREATE_BEZIER CLOSED 72.0 72.0 L 216.0 72.0 L 216.0 216.0,
```

L 72.0 216.0

Known bugs

None.

See also...

CREATE\_LINE, CREATE\_FREEHAND

## 1.16 ARexx.guide/CREATE\_ELLIPSE

CREATE\_ELLIPSE

\*\*\*\*\*

Synopsis

Creates an ellipse object. Allows you to specify its position, horizontal and vertical size.

Parameters Template

X/A, Y/A, RX, RY

Return Template

NAME

Parameters

X/A

The horizontal (X) position on the page used for the centre of the ellipse which will form the ellipse.

Y/A

The vertical (Y) position on the page used for the centre of the ellipse which will form the ellipse.

RX/A

The horizontal (X) radius of the ellipse.

RY/A

The vertical (Y) radius of the ellipse.

Returns

NAME

The name of the newly created object.

Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example

The following creates an ellipse in the top-left corner of the page. The ellipse is 2 inches wide by half an inch tall and fits neatly against the corner of the page:

```
CREATE_ELLIPSE 72.0 18.0 72.0 18.0
```

Known bugs  
None.

See also...  
CREATE\_ARC

## 1.17 ARexx.guide/CREATE\_FREEHAND

CREATE\_FREEHAND  
\*\*\*\*\*

Synopsis  
Creates a freehand object. A freehand object is simply a list of connected points which are joined together smoothly with lines and curves.

Parameters Template  
PARAMS/M/A

Return Template  
NAME

Parameters  
PARAMS/M/A  
The only parameters to the freehand are a list of coordinate points which specify the points on the object. The object that is created is a Bezier object like that created by the CREATE\_BEZIER command.

Returns  
NAME  
The name of the newly created object.

Errors  
rc = 0 if operation was successful.  
  
rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example  
The following creates a squiggle on the page:

```
CREATE_FREEHAND 0.0 0.0 100.0 120.0 80.0 170.0 200.0 140.0
```

Known bugs  
None.

See also...  
CREATE\_BEZIER, CREATE\_LINE

---



## 1.18 ARexx.guide/CREATE\_LINE

CREATE\_LINE

\*\*\*\*\*

### Synopsis

Creates a line object. The object simply joins 2 coordinate points on the page with a straight line.

### Parameters Template

X1/A, Y1/A, X2/A, Y2/A

### Return Template

NAME

### Parameters

X1

The starting horizontal (X) coordinate of the line.

Y1

The starting vertical (Y) coordinate of the line.

X2

The end horizontal (X) coordinate of the line.

Y2

The end vertical (Y) coordinate of the line.

### Returns

NAME

The name of the newly created object.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

### Example

The following creates a straight line from the top-left of the page:

```
CREATE_LINE 0.0 0.0 72.0 144.0
```

### Known bugs

None.

### See also...

CREATE\_FREEHAND, CREATE\_BEZIER

## 1.19 ARexx.guide/CREATE\_RECT

CREATE\_RECT

---

\*\*\*\*\*

#### Synopsis

Creates a rectangle object. The object creates a rectangle passing through the two coordinate points given.

#### Parameters Template

X1/A, Y1/A, X2/A, Y2/A

#### Return Template

NAME

#### Parameters

X1

The top-left horizontal (X) coordinate of the line.

Y1

The top-left vertical (Y) coordinate of the line.

X2

The bottom-right horizontal (X) coordinate of the line.

Y2

The bottom-right vertical (Y) coordinate of the line.

#### Returns

NAME

The name of the newly created object.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following creates a rectangle from the top-left of the page:

```
CREATE_RECT 0.0 0.0 72.0 144.0
```

#### Known bugs

None.

#### See also...

Nothing.

## 1.20 ARexx.guide/CREATE\_RND

#### CREATE\_RND

\*\*\*\*\*

#### Synopsis

Creates a rounded rectangle object. The object creates a rectangle with rounded corners passing through the two coordinate points

given.

#### Parameters Template

X1/A, Y1/A, X2/A, Y2/A, RADIUS

#### Return Template

NAME

#### Parameters

X1/A

The top-left horizontal (X) coordinate of the line.

Y1/A

The top-left vertical (Y) coordinate of the line.

X2/A

The bottom-right horizontal (X) coordinate of the line.

Y2/A

The bottom-right vertical (Y) coordinate of the line.

RADIUS

The radius of the corners of the rectangle. If no value is given, the value set in the current set of project attributes is used.

#### Returns

NAME

The name of the newly created object.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following creates a rectangle from the top-left of the page, with the current corner radius:

```
CREATE_RND 0.0 0.0 72.0 144.0
```

This creates the same sized rectangle as above, only with a corner radius of 10 points:

```
CREATE_RND 0.0 0.0 72.0 144.0 10.0
```

#### Known bugs

None.

#### See also...

Nothing.

---

## 1.21 ARexx.guide/CREATE\_TEXT

CREATE\_TEXT

\*\*\*\*\*

### Synopsis

Creates a text object with the given text string. The attributes of the text can be changed with the ATTRS\_TEXT\_SET command.

### Parameters Template

X/A, Y/A, STRING/A

### Return Template

NAME

### Parameters

X/A

The horizontal (X) value of the text start.

Y/A

The vertical (Y) value of the text start.

STRING/A

The text string the use in the object. Remember, if you are using spaces in your text string you must enclose this argument in quotes.

### Returns

NAME

The name of the newly created object.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

### Example

The following creates the text string "Hello world" 1 inch from the left of the page and 2 inches from the top of the page.

```
CREATE_TEXT 72.0 144.0 '"Hello world"'
```

### Known bugs

None.

### See also...

Nothing.

## 1.22 ARexx.guide/CUT

CUT

\*\*\*

---

### Synopsis

Copies the currently selected objects into the system clipboard and then removes the selected objects from the page. They may then be pasted out to elsewhere in the current project, to another DrawStudio project or to another application that understands the DrawStudio format.

See also COPY and PASTE.

### Parameters Template

None.

### Return Template

None.

### Parameters

None.

### Returns

Nothing.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

### Example

The following cuts the currently selected objects to the clipboard:

```
CUT
```

### Known bugs

None.

### See also...

COPY, PASTE

## 1.23 ARexx.guide/MENU

### MENU

\*\*\*\*

### Synopsis

Simulates selecting a particular menu item from the menus. Allows access to all the menu functions from an ARexx script.

To select a particular menu item, you have to specify upto 3 parameters. A menu has a "MENU" part (e.g. "Project" or "Edit"), and an "ITEM" part (e.g. "Copy" and "Paste" are items of the "Edit" menu). Some menu items display SUB-menus, and this can be specified (e.g. "Left", "Centre" and "Right" are sub-menus of the "Text/Alignment" menu item).

---

#### Parameters Template

MENU/A, ITEM/A, SUB

#### Return Template

None.

#### Parameters

MENU/A

The text of the main menu. This must match the text in the menu exactly (including spaces).

ITEM/A

The text of the menu item. This must match the text in the menu exactly (including spaces).

SUB

The text of the menu item's submenu, should the item have a submenu. This must match the text in the menu exactly (including spaces).

#### Returns

Nothing.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following opens the align requester:

```
MENU "Object" "Align..."
```

The following opens the save requester. Note the use of two sets of quotes because the menu item text contains spaces:

```
MENU "Project" '"Save as..."'
```

This sets the current text alignment to centre:

```
MENU "Text" "Alignment" "Centre"
```

#### Known bugs

None.

#### See also...

Nothing.

## 1.24 ARexx.guide/OBJECT\_ALIGN

#### OBJECT\_ALIGN

\*\*\*\*\*

---

### Synopsis

Allows you to align all the selected objects to a given set of rules. Object can be aligned relative to the page or relative to themselves and can be left, right or centrally aligned both horizontally and vertically. Furthermore, the objects can also be aligned or distributed to form an even spread of objects.

### Parameters Template

TOPAGE/S, ALIGN\_X/S, DISTRIBUTE\_X/S, ALIGN\_Y/S, DISTRIBUTE\_Y/S, LEFT/S, CENTRE\_X/S, RIGHT/S, WIDTH/S, TOP/S, CENTRE\_Y/S, BOTTOM/S, HEIGHT/S

### Return Template

None.

### Parameters

#### TOPAGE/S

By default, all objects are aligned or distributed with respect to themselves (i.e. within their own bounding box). Setting this switch will align the objects with respect to the page as a whole.

#### ALIGN\_X/S

By default, the objects' horizontal (X) positions will remain unaltered by this command. Setting this switch, however, will force the objects horizontal positions to be aligned. How they are aligned is determined by the LEFT, CENTRE\_X and RIGHT switches, described below.

#### DISTRIBUTE\_X/S

By default, the objects' horizontal (X) positions will remain unaltered by this command. Setting this switch, however, will force the objects horizontal positions to be distributed evenly. How they are distributed is determined by the LEFT, CENTRE\_X, RIGHT and WIDTH switches, described below.

#### ALIGN\_Y/S

By default, the objects' vertical (Y) positions will remain unaltered by this command. Setting this switch, however, will force the objects vertical positions to be aligned. How they are aligned is determined by the TOP, CENTRE\_Y and BOTTOM switches, described below.

#### DISTRIBUTE\_Y/S

By default, the objects' vertical (Y) positions will remain unaltered by this command. Setting this switch, however, will force the objects vertical positions to be distributed evenly. How they are distributed is determined by the TOP, CENTRE\_Y, BOTTOM and HEIGHT switches, described below.

#### LEFT/S

When using either the ALIGN\_X or DISTRIBUTE\_X switches, this switch will tell the alignment routines to use each object's left edge as the point of alignment/ distribution.

#### CENTRE\_X/S

When using either the `ALIGN_X` or `DISTRIBUTE_X` switches, this switch will tell the alignment routines to use each object's horizontal (X) centre as the point of alignment/ distribution.

#### RIGHT/S

When using either the `ALIGN_X` or `DISTRIBUTE_X` switches, this switch will tell the alignment routines to use each object's right edge as the point of alignment/ distribution.

#### WIDTH/S

When using `DISTRIBUTE_X` switch, this switch will tell the alignment routines to leave an equal space between each object - i.e. distribute each object's width evenly.

#### TOP/S

When using either the `ALIGN_Y` or `DISTRIBUTE_Y` switches, this switch will tell the alignment routines to use each object's top edge as the point of alignment/ distribution.

#### CENTRE\_Y/S

When using either the `ALIGN_Y` or `DISTRIBUTE_Y` switches, this switch will tell the alignment routines to use each object's vertical (Y) centre as the point of alignment/ distribution.

#### BOTTOM/S

When using either the `ALIGN_Y` or `DISTRIBUTE_Y` switches, this switch will tell the alignment routines to use each object's bottom edge as the point of alignment/ distribution.

#### HEIGHT/S

When using `DISTRIBUTE_Y` switch, this switch will tell the alignment routines to leave an equal space between each object - i.e. distribute each object's height evenly.

#### Returns

Nothing.

#### Errors

`rc = 0` if operation was successful.

`rc = 10` if the operation failed for any reason, `rc2` will contain a string describing the problem.

#### Example

The following centres all the selected objects centrally on the page:

```
OBJECT_ALIGN TOPAGE ALIGN_X CENTRE_X
```

The following distributes all the selected object vertically on the page, whilst aligning them to the left of the page:

```
OBJECT_ALIGN TOPAGE ALIGN_X LEFT DISTRIBUTE_Y HEIGHT
```

#### Known bugs

None.

---



See also...  
Nothing.

## 1.25 ARexx.guide/OBJECT\_CLONE

OBJECT\_CLONE  
\*\*\*\*\*

Synopsis  
Creates a copy of the selected objects, offset by a user-defined distance.

Parameters Template  
DX, DY

Return Template  
None.

Parameters  
DX  
An optional distance to move the object horizontally. If no value is given, the value from the user's preferences will be used.

DY  
An optional distance to move the object vertically. If no value is given, the value from the user's preferences will be used.

Returns  
Nothing.

Errors  
rc = 0 if operation was successful.  
  
rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example  
The following clones the selected objects, offsetting them the default distance as set in the user preferences:

```
OBJECT_CLONE
```

The following clones the selected objects, offsetting them 1 inch to the right and 2 inches above the original objects:

```
OBJECT_CLONE 72.0 -144.0
```

Known bugs  
None.

See also...  
Nothing.

---

## 1.26 ARexx.guide/OBJECT\_CONVERTTOBEZIER

OBJECT\_CONVERTTOBEZIER

\*\*\*\*\*

### Synopsis

Converts selected objects to Bezier objects, where possible.

### Parameters Template

None.

### Return Template

None.

### Parameters

None.

### Returns

Nothing.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

rc = 10 if some objects could not be converted to Beziers (e.g. bitmap objects cannot be converted to Bezier objects).

### Example

The following converts selected objects to Bezier objects:

```
OBJECT_CONVERTTOBEZIER
```

### Known bugs

None.

### See also...

Nothing.

## 1.27 ARexx.guide/OBJECT\_DELETE

OBJECT\_DELETE

\*\*\*\*\*

### Synopsis

Deletes selected objects.

### Parameters Template

None.

Return Template

None.

Parameters

None.

Returns

Nothing.

Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example

The following deletes the selected objects:

```
OBJECT_DELETE
```

Known bugs

None.

See also...

Nothing.

## 1.28 ARexx.guide/OBJECT\_DESELECT

OBJECT\_DESELECT

\*\*\*\*\*

Synopsis

Deselects the named object.

Parameters Template

NAME

Return Template

None.

Parameters

NAME

The name of the object to be deselected. If no object name is given, all objects are deselected.

Returns

Nothing.

Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a

---

string describing the problem.

#### Example

The following deselects all objects:

```
OBJECT_DESELECT
```

The following deselects the object called "TEXT.5":

```
OBJECCR_DESELECT "TEXT.5"
```

#### Known bugs

None.

See also...

OBJECT\_SELECT

## 1.29 ARexx.guide/OBJECT\_GROUP

OBJECT\_GROUP

\*\*\*\*\*

#### Synopsis

Groups the selected objects into a single, grouped, object.

#### Parameters Template

None.

#### Return Template

NAME

#### Parameters

None.

#### Returns

NAME

The name of the group object created.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following groups all the selected objects:

```
OBJECT_GROUP
```

#### Known bugs

None.

See also...

OBJECT\_UNGROUP

---

## 1.30 ARexx.guide/OBJECT\_JOIN

OBJECT\_JOIN

\*\*\*\*\*

### Synopsis

Joins 2 selected objects by connecting their closest points.

### Parameters Template

None.

### Return Template

NAME

### Parameters

None.

### Returns

NAME

The name of the joined object created.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

### Example

The following joins 2 selected objects at their closest end points.

OBJECT\_JOIN

### Known bugs

None.

### See also...

Nothing.

## 1.31 ARexx.guide/OBJECT\_MAKE\_COMPOUND

OBJECT\_MAKE\_COMPOUND

\*\*\*\*\*

### Synopsis

Makes the selected objects a single, compound, object.

### Parameters Template

None.

#### Return Template

NAME

#### Parameters

None.

#### Returns

NAME

The name of the compound object created.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following creates a compound object from the selected objects:

```
OBJECT_MAKE_COMPOUND
```

#### Known bugs

None.

#### See also...

OBJECT\_SPLIT\_COMPOUND

## 1.32 ARexx.guide/OBJECT\_MOVE

#### OBJECT\_MOVE

\*\*\*\*\*

#### Synopsis

Moves the selected objects a given distance.

#### Parameters Template

X, Y

#### Return Template

None.

#### Parameters

X

The distance to move the objects in the horizontal (X) direction. This parameter may be omitted to avoid any movement in the X direction.

Y

The distance to move the objects in the vertical (Y) direction. This parameter may be omitted to avoid any movement in the Y direction.

#### Returns

Nothing.

---

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following moves all the selected objects 1 inch to the left:

```
OBJECT_MOVE -72.0
```

The following moves all the selected objects 2 inches to the right and 1 inch down:

```
OBJECT_MOVE 144.0 72.0
```

#### Known bugs

None.

See also...

OBJECT\_SCALE, OBJECT\_ROTATE

## 1.33 ARexx.guide/OBJECT\_ROTATE

OBJECT\_ROTATE

\*\*\*\*\*

#### Synopsis

Rotates the selected objects a given angle.

#### Parameters Template

ANGLE/A, CX, CY

#### Return Template

None.

#### Parameters

ANGLE/A

The angle of rotation (in degrees) for the selected objects to be rotated. Positive angles are clockwise, negative angles are anti-clockwise.

CX

The horizontal (X) centre of rotation - if no value is given, the horizontal centre of the object is used.

CY

The vertical (Y) centre of rotation - if no value is given, the vertical centre of the object is used.

#### Returns

Nothing.

---

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following rotates the selected objects 45 degrees clockwise around the centre of the objects:

```
OBJECT_ROTATE 45.0
```

The following rotates the selected objects 10 degrees anti-clockwise around the top left of the page:

```
OBJECT_ROTATE 10.0 0.0 0.0
```

#### Known bugs

None.

See also...

OBJECT\_MOVE, OBJECT\_SCALE

## 1.34 ARexx.guide/OBJECT\_SCALE

OBJECT\_SCALE

\*\*\*\*\*

#### Synopsis

Scales (resizes) the objects by the given amount. Different horizontal and vertical scaling values may be given, as well as a defined centre of the scale.

#### Parameters Template

SX, SY, CX, CY

#### Return Template

None.

#### Parameters

SX

The amount to scale the object in the horizontal (X) direction. For example, a value of 1.0 means "no scale", 2.0 means "double" and 0.25 means "quarter" scale. If no value is given, the object is not scaled in the X direction.

SY

The amount to scale the object in the vertical (Y) direction. For example, a value of 1.0 means "no scale", 2.0 means "double" and 0.25 means "quarter" scale. If no value is given, the object is not scaled in the Y direction.

CX

The horizontal (X) centre of the resize - if no value is



given, the horizontal centre of the object is used.

CY

The vertical (Y) centre of the resize – if no value is given, the vertical centre of the object is used.

Returns

Nothing.

Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example

The following halves the size of the selected objects:

```
OBJECT_SCALE 0.5 0.5
```

The following doubles the width and trebles the height of the selected objects around the top-left of the page:

```
OBJECT_SCALE 2.0 3.0 0.0 0.0
```

Known bugs

None.

See also...

OBJECT\_MOVE, OBJECT\_ROTATE

## 1.35 ARexx.guide/OBJECT\_SELECT

OBJECT\_SELECT

\*\*\*\*\*

Synopsis

Make the named object selected. If no name is given, all the objects on the page are selected.

Parameters Template

NAME

Return Template

None.

Parameters

NAME

The name of the object to be selected. If the object is already selected, it will remain selected. If no name is given, all the objects on the page are selected.

Returns

Nothing.

---

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following selects all the objects on the page:

```
OBJECT_SELECT
```

The following selects the object called "BITMAP.7":

```
OBJECT_SELECT "BITMAP.7"
```

#### Known bugs

None.

See also...

OBJECT\_DESELECT

## 1.36 ARexx.guide/OBJECT\_SPECS\_GET

OBJECT\_SPECS\_GET

\*\*\*\*\*

#### Synopsis

Returns position information on the selected object(s).

#### Parameters Template

None.

#### Return Template

NUMSELECTED/N, NAME, LEFT, TOP, RIGHT, BOTTOM, WIDTH, HEIGHT,  
ROTATION, RNDRADIUS

#### Parameters

None.

#### Returns

NUMSELECTED/N

The number of selected objects.

NAME

If one object only is selected, this is the name of the selected object.

LEFT

The location of the left edge of the object(s) bounding box.

TOP

The location of the top edge of the object(s) bounding box.

---

**RIGHT**

The location of the right edge of the object(s) bounding box.

**BOTTOM**

The location of the bottom edge of the object(s) bounding box.

**WIDTH**

The width of the selected object(s).

**HEIGHT**

The height of the selected object(s).

**ROTATION**

The angle, in degrees, through which the object has been rotated.

**RNDRADIUS**

The radius of the corners of a rounded rectangle. This value is only returned for rounded rectangle objects.

**Errors**

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

**Example**

The following returns information on the selected object(s) into a stem variable called "OBJSPECS":

```
OBJECT_SPECS_GET STEM 'OBJSPECS.'
```

**Known bugs**

None.

**See also...**

PAGE\_SPECS\_GET

## 1.37 ARexx.guide/OBJECT\_SPLIT\_COMPOUND

**OBJECT\_SPLIT\_COMPOUND**

\*\*\*\*\*

**Synopsis**

Splits any selected compound objects into their constituent Bezier objects.

**Parameters Template**

None.

**Return Template**

None.

**Parameters**

None.

Returns

Nothing.

Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example

The following splits any selected compound objects into their constituent Bezier objects:

```
OBJECT_SPLIT_COMPOUND
```

Known bugs

None.

See also...

OBJECT\_MAKE\_COMPOUND

## 1.38 ARexx.guide/OBJECT\_TOBACK

OBJECT\_TOBACK

\*\*\*\*\*

Synopsis

Moves the selected objects behind other objects on the page, toward the back of the page. Objects may be moved all the way to the back of the layer or they may be "shuffled" back slowly toward the back.

Note that the objects will always remain in their current layer, i.e. they will never change layers.

Parameters Template

SHUFFLE/S

Return Template

None.

Parameters

SHUFFLE/S

By default, the selected objects are moved all the way to the back of the layer using this command. By using the "SHUFFLE" parameter, the objects can be moved back slowly past the other objects in the layer to the desired depth.

Returns

Nothing.

Errors

---

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following moves the selected objects to the back of their layer:

```
OBJECT_TOBACK
```

The following shuffles the selected objects back one level:

```
OBJECT_TOBACK SHUFFLE
```

#### Known bugs

None.

See also...

OBJECT\_TOFRONT

## 1.39 ARexx.guide/OBJECT\_TOFRONT

OBJECT\_TOFRONT

\*\*\*\*\*

#### Synopsis

Moves the selected objects in front of other objects on the page, toward the front of the page. Objects may be moved all the way to the front of the layer or they may be "shuffled" forwards slowly toward the front.

Note that the objects will always remain in their current layer, i.e. they will never change layers.

#### Parameters Template

SHUFFLE/S

#### Return Template

None.

#### Parameters

SHUFFLE/S

By default, the selected objects are moved all the way to the front of the layer using this command. By using the "SHUFFLE" parameter, the objects can be moved forwards slowly past the other objects in the layer to the desired depth.

#### Returns

Nothing.

#### Errors

rc = 0 if operation was successful.

---

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following moves the selected objects to the front of their layer:

```
OBJECT_TOFRONT
```

The following shuffles the selected objects forward one level:

```
OBJECT_TOFRONT SHUFFLE
```

#### Known bugs

None.

See also...

OBJECT\_TOBACK

## 1.40 ARexx.guide/OBJECT\_UNGROUP

OBJECT\_UNGROUP

\*\*\*\*\*

#### Synopsis

Ungroups any selected group objects into their constituent individual objects. Only one layer of ungrouping is performed, i.e. if the group objects themselves contained grouped objects, they must be ungrouped separately.

#### Parameters Template

None.

#### Return Template

None.

#### Parameters

None.

#### Returns

Nothing.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following ungroups all selected group objects:

```
OBJECT_UNGROUP
```

#### Known bugs

None.

See also...

OBJECT\_GROUP

## 1.41 ARexx.guide/PAGE\_SPECS\_GET

PAGE\_SPECS\_GET

\*\*\*\*\*

### Synopsis

Returns size and orientation information on the current page.

### Parameters Template

None.

### Return Template

WIDTH, HEIGHT, ORIENTATION

### Parameters

None.

### Returns

WIDTH

The width, in points, of the current page.

HEIGHT

The height, in points, of the current page.

ORIENTATION

This is either "Landscape" or "Portrait" depending on whether the page is horizontally or vertically orientated.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

### Example

The following returns information on the current page into a stem variable called "PAGESPECS":

```
PAGE_SPECS_GET STEM 'PAGESPECS.'
```

### Known bugs

None.

See also...

OBJECT\_SPECS\_GET

---

## 1.42 ARexx.guide/PASTE

PASTE

\*\*\*\*\*

### Synopsis

Pastes objects from the clipboard onto the current page. The objects can be pasted at a given location or at a user-chosen place.

### Parameters Template

X, Y

### Return Template

None.

### Parameters

X

The horizontal (X) location for the objects to be pasted. This value must be given with the Y value (see below), or else an interactive paste will be performed where the user can click on the page to choose the paste location.

Y

The vertical (Y) location for the objects to be pasted. This value must be given with the X value (see above), or else an interactive paste will be performed where the user can click on the page to choose the paste location.

### Returns

Nothing.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

### Example

The following pastes the objects at the top left of the page:

```
PASTE 0.0 0.0
```

The following pastes the objects interactively, allowing the user to click on the page to choose the paste location:

```
PASTE
```

### Known bugs

This command returns immediately, even if you choose PASTE with no parameters (waiting for user input). There is currently no way of waiting for the user to perform the paste.

See also...

CUT, COPY

---



## 1.43 ARexx.guide/PROJECT\_CLOSE

PROJECT\_CLOSE

\*\*\*\*\*

### Synopsis

Closes the current project, removing any project locks (see PROJECT\_LOCK).

### Parameters Template

FORCE/S

### Return Template

None.

### Parameters

FORCE/S

Close the current project without asking the user's permission. By default, if the project has been changed you will be asked to confirm that the project is about to be closed.

### Returns

Nothing.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

### Example

The following closes the current project, asking permission if the project has been changed since the last time it was saved:

```
PROJECT_CLOSE
```

The following closes the current project, without asking permission if the project has been changed since the last time it was saved:

```
PROJECT_CLOSE FORCE
```

### Known bugs

None.

### See also...

PROJECT\_OPEN, PROJECT\_SAVE

## 1.44 ARexx.guide/PROJECT\_LOCK

PROJECT\_LOCK

\*\*\*\*\*

---

### Synopsis

Locks the named project, bringing up the "busy" mouse pointer and blocking any input from the GUI. This command should be used before any other ARexx commands are executed to avoid the user interrupting the ARexx script from the GUI.

The project may be unlocked at the end of the ARexx script with the PROJECT\_UNLOCK command. Locking another project will unlock the current project before locking the new project.

### Parameters Template

NAME

### Return Template

None.

### Parameters

NAME

The parameter allows you to specify the name of the project to be locked. If no name, the current project will be locked (i.e. the last used project).

### Returns

Nothing.

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

### Example

The following locks the current project:

```
PROJECT_LOCK
```

The following locks a project called "PROJECT.3":

```
PROJECT_LOCK "PROJECT.3"
```

### Known bugs

None.

### See also...

PROJECT\_UNLOCK, PROJECT\_CLOSE

## 1.45 ARexx.guide/PROJECT\_NEW

### PROJECT\_NEW

\*\*\*\*\*

### Synopsis

Creates a new project, ready for editing.

Currently, a maximum of 10 projects may be open at any one time.

#### Parameters Template

None.

#### Return Template

NAME

#### Parameters

None.

#### Returns

NAME

The name of the newly opened project.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following creates a new project:

```
PROJECT_NEW
```

#### Known bugs

None.

See also...

PROJECT\_CLOSE, PROJECT\_OPEN

## 1.46 ARexx.guide/PROJECT\_OPEN

PROJECT\_OPEN

\*\*\*\*\*

#### Synopsis

Opens a project from disk, ready for editing.

Currently, a maximum of 10 projects may be open at any one time.

#### Parameters Template

FILE/A

#### Return Template

NAME

#### Parameters

FILE/A

The filename of the project to open.

#### Returns

NAME

---

The name of the newly opened project.

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following opens a new project from the RAM disk:

```
PROJECT_OPEN "ram:penknife.dsdr"
```

The following opens a project from the hard disk. Notice the use of double-quotes because the filename contains spaces:

```
PROJECT_OPEN "Work:Draw Files/F1Car.dsdr"
```

#### Known bugs

None.

See also...

PROJECT\_NEW, PROJECT\_CLOSE

## 1.47 ARexx.guide/PROJECT\_PLACE

PROJECT\_PLACE

\*\*\*\*\*

#### Synopsis

Opens a graphic from disk, placing it on the current page.  
DrawStudio will auto-detect the format of the graphic as it loads.

#### Parameters Template

FILE/A, X, Y

#### Return Template

None.

#### Parameters

FILE/A

The filename of the graphic to import.

X

The horizontal (X) position to place the graphic. This value must be given along with the Y value (see below), otherwise the user will be required to manually place the graphic on the page.

Y

The vertical (Y) position to place the graphic. This value must be given along with the X value (see above), otherwise the user will be required to manually place the graphic on the page.

---

#### Returns

Nothing

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following opens a graphic from the RAM disk, placing it in the top-left corner of the page:

```
PROJECT_PLACE "ram:FigGlover.gif" 0.0 0.0
```

The following allows you to place a graphic on the current page by clicking:

```
PROJECT_PLACE "Work:Graphics/Pics/Cheetah.ilbm"
```

#### Known bugs

None.

#### See also...

Nothing.

## 1.48 ARexx.guide/PROJECT\_SAVE

### PROJECT\_SAVE

\*\*\*\*\*

#### Synopsis

Saves the current project out to disk. If the filename given already exists, the user will be asked whether they wish to overwrite it unless the FORCE switch is given.

#### Parameters Template

FILE/A, FORCE/S

#### Return Template

None.

#### Parameters

FILE/A

The filename of the project to save.

FORCE/S

By specifying the FORCE switch, the user will not be warned if they are about to overwrite an existing file.

#### Returns

Nothing

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following saves the current project to disk:

```
PROJECT_SAVE "Work:Draw/Poster.dsdr"
```

The following saves the current project to RAM disk, overwriting the file without asking for user confirmation:

```
PROJECT_SAVE "ram:artwork.dsdr" FORCE
```

#### Known bugs

None.

#### See also...

PROJECT\_CLOSE, PROJECT\_NEW

## 1.49 ARexx.guide/PROJECT\_UNLOCK

PROJECT\_UNLOCK

\*\*\*\*\*

#### Synopsis

Removes the GUI lock, added with the PROJECT\_LOCK command. This will allow the user to use DrawStudio's user interface. You should end all ARexx scripts with a PROJECT\_UNLOCK to return control to the user.

#### Parameters Template

None.

#### Return Template

None.

#### Parameters

None.

#### Returns

Nothing

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following unlocks the currently locked project:

---

PROJECT\_UNLOCK

Known bugs  
None.

See also...  
PROJECT\_LOCK, PROJECT\_CLOSE

## 1.50 ARexx.guide/QUIT

QUIT  
\*\*\*\*

Synopsis  
Exits the program. The user will be asked whether they wish to save any open projects, unless the FORCE switch is used.

Parameters Template  
FORCE/S

Return Template  
None.

Parameters  
FORCE/S  
By specifying the FORCE switch, the user will not be warned if they are about quit the program and there are unsaved projects open.

Returns  
Nothing

Errors  
rc = 0 if operation was successful.  
  
rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example  
The following quits DrawStudio, asking the user if they wish to save any unsaved projects:

QUIT

The following quits DrawStudio without asking for user confirmation:

QUIT FORCE

Known bugs  
The command does not return an error if the program does not quit. To determine whether the program has quit at the moment, try and lock or unlock a project after issuing the command and see whether this returns an error.

---

See also...  
Nothing.

## 1.51 ARexx.guide/REDO

REDO

\*\*\*\*

### Synopsis

Redoes the last undone command.

### Parameters Template

None.

### Return Template

None.

### Parameters

None.

### Returns

Nothing

### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

### Example

The following redoes the last undone command:

```
REDO
```

### Known bugs

None.

See also...

UNDO

## 1.52 ARexx.guide/REDRAW\_OFF

REDRAW\_OFF

\*\*\*\*\*

### Synopsis

Turns the project redraw off, allowing for much faster operations on the selected objects as they do not have to be redraw after each operation. The redraw is turned back on with the REDRAW\_ON



command.

Parameters Template  
None.

Return Template  
None.

Parameters  
None.

Returns  
Nothing

Errors  
rc = 0 if operation was successful.  
  
rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example  
The following turns the project redraw off:

```
REDRAW_OFF
```

Known bugs  
None.

See also...  
REDRAW\_ON

## 1.53 ARexx.guide/REDRAW\_ON

REDRAW\_ON  
\*\*\*\*\*

Synopsis  
Turns the project redraw on, after being turned off with the REDRAW\_OFF command. The project is redraw to show the changes caused by the actions performed whilst the redraw was off.  
  
The redraw is also turned back on after a PROJECT\_UNLOCK command.

Parameters Template  
None.

Return Template  
None.

Parameters  
None.

Returns  
Nothing

---

#### Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

#### Example

The following turns the project redraw on:

```
REDRAW_ON
```

#### Known bugs

None.

See also...

REDRAW\_OFF, PROJECT\_UNLOCK

## 1.54 ARexx.guide/REQ\_FILE

REQ\_FILE

\*\*\*\*\*

#### Synopsis

Opens a general purpose file requester, allowing the user to choose a file. The name of the file is returned to the ARexx script, allowing any operation to be performed on the chosen file.

#### Parameters Template

TITLE, PATH, FILE, AUTOCANCEL/S

#### Return Template

FILE, RESULT/N

#### Parameters

##### TITLE

The text to place in the top title bar of the requester. Usually the text should inform the user what will happen to the selected file (i.e. "Choose a file to load..." or "Choose a file to delete").

##### PATH

The default path for the file requester (e.g. "ram:" or "Work:Graphics").

##### FILE

The default file for the file requester.

##### AUTOCANCEL/S

By selecting this switch, the file requester will return an error should the user click on the "Cancel" button. By default, the requester will return the result of which button was clicked in the "RESULT" variable.

## Returns

## FILE

The full filename (including path) of the chosen file from the requester.

## RESULT

The number of the button chosen ("OK" or "Cancel") to close the requester; this is only returned if the AUTOCANCEL parameter is not used (see above). "OK" returns 1, "Cancel" return 0.

## Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

## Example

The following opens a simple file requester, stopping the script if the user cancels the requester:

```
REQ_FILE AUTOCANCEL
```

The following will delete the chosen file, with "ram:deleteme.dsdr" being the default:

```
REQ_FILE "Choose a file to delete...",
  "ram:" "deleteme.dsdr" STEM req.

if req.result == 1 then do
  /* Address the system and delete the file */

  address command delete "'req.file'"

end
```

## Known bugs

None.

## See also...

REQ\_MESSAGE, MENU

## 1.55 ARexx.guide/REQ\_MESSAGE

## REQ\_MESSAGE

\*\*\*\*\*

## Synopsis

Opens a general purpose message requester. The user may choose the message text and the number/text of the buttons used in the requester.

## Parameters Template

TEXT, BUTTONS, AUTOCANCEL/S

---

## Return Template

RESULT/N

## Parameters

TEXT/A

The text to place in the requester.

## BUTTONS

This parameter lets you specify the number of buttons to use in the requester, as well as the text to be used in the buttons. If this parameter is not given, the requester buttons will be of the form "OK/Cancel".

To specify a different set of buttons, enter the text for the buttons separated by vertical bar ("|") characters.

For example, "OK" would produce a simple requester with one button and "Good|Bad|Ugly" would produce a requester with 3 buttons.

The button number chosen by the user (providing the AUTOCANCEL switch is not in use, see below) will be returned in the RESULT variable. The rightmost button has the value 0, with the buttons being numbered 1,2,3,etc... from the left.

## AUTOCANCEL/S

By selecting this switch, the file requester will return an error should the user click on the "Cancel" or rightmost button. By default, the requester will return the result of which button was clicked in the "RESULT" variable.

## Returns

FILE

The full filename (including path) of the chosen file from the requester.

## RESULT

The button number chosen by the user (providing the AUTOCANCEL switch is not in use, see above). The rightmost button has the value 0, with the buttons being numbered 1,2,3,etc... from the left.

## Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

## Example

The following opens a simple OK/Cancel requester, stopping the script if the user clicks on Cancel:

```
REQ_MESSAGE 'Delete object ?' AUTOCANCEL
```

This will open a simple information requester:

---

```
REQ_MESSAGE ' "Hello world"' "OK"
```

The following will interrogate the user and respond accordingly:

```
REQ_MESSAGE ' "What do you think of the show so far?"',  
  ' "Great|OK|Poor"'
```

```
if result == 1 then  
  REQ_MESSAGE ' "Thank you!"' "OK"  
else if result == 2 then  
  REQ_MESSAGE ' "We are trying very hard"' "OK"  
else  
  REQ_MESSAGE ' "I am sorry you feel that way"' "OK"
```

Known bugs

None.

See also...

REQ\_FILE, MENU

## 1.56 ARexx.guide/SCRIPT

SCRIPT

\*\*\*\*\*

Synopsis

Calls a named ARexx script, located in the DrawStudio ARexx drawer.

Parameters Template

FILE/A

Return Template

None.

Parameters

FILE/A

The name of the ARexx script to call. You do not need to give a filename path or extension when using the SCRIPT command.

Returns

Nothing.

Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example

The following calls the soft shadow script:

```
SCRIPT 'ShadowSoft'
```

Known bugs

---

None.

See also...

Nothing.

## 1.57 ARexx.guide/UNDO

UNDO

\*\*\*\*

Synopsis

Undos the last action performed on the project. The action may be redone with the REDO command.

Parameters Template

None.

Return Template

None.

Parameters

None.

Returns

Nothing.

Errors

rc = 0 if operation was successful.

rc = 10 if the operation failed for any reason, rc2 will contain a string describing the problem.

Example

The following undos the last action:

UNDO

Known bugs

None.

See also...

REDO

---