

MagnifiCAD_help

Anders Granli

Copyright © CopyrightÂ©1995-96 Anders Granli.

COLLABORATORS

	<i>TITLE :</i> MagnifiCAD_help		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY	Anders Granli	July 25, 2024	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

1	MagnifiCAD_help	1
1.1	MagnifiCAD Help v1.1	1
1.2	secintro	2
1.3	secscreen	2
1.4	sectypes	2
1.5	secgener	2
1.6	secpicki	2
1.7	secdelet	3
1.8	secgeome	3
1.9	seceleme	3
1.10	secsymbo	3
1.11	secsnapm	4
1.12	secmenus	4
1.13	introsyste	4
1.14	introregis	4
1.15	introdrawi	5
1.16	screentools	5
1.17	screenproje	6
1.18	projwinborder	6
1.19	projwincoordsnapbar	6
1.20	projwinfield	7
1.21	projwintextbar	7
1.22	typesmodif	7
1.23	typesopera	7
1.24	tool_linemode	8
1.25	tool_enclosuremode	8
1.26	tool_polyline	8
1.27	tool_polycurve	8
1.28	tool_arc	9
1.29	tool_counterarc	9

1.30	tool_circle	9
1.31	req_ceaoptions	9
1.32	tool_ellipse	9
1.33	tool_rectangle	9
1.34	tool_rectangle3	10
1.35	tool_polygon	10
1.36	req_polyoptions	10
1.37	tool_text	10
1.38	topolevel	10
1.39	tool_element	10
1.40	tool_segment	11
1.41	tool_point	11
1.42	pickiprepi	11
1.43	tool_pick	11
1.44	pickiunpic	11
1.45	tool_delete	11
1.46	geomemodif	12
1.47	tool_self	12
1.48	tool_copy	12
1.49	geometrans	12
1.50	tool_move	12
1.51	tool_rotate	12
1.52	tool_scale	13
1.53	tool_mirror	13
1.54	geomeobjec	13
1.55	elemesetti	13
1.56	tool_setcolor	13
1.57	tool_setlinestyle	14
1.58	tool_setlineweight	14
1.59	tool_sethatch	14
1.60	tool_setlayer	14
1.61	tool_setall	14
1.62	symbolcreatesymbol	14
1.63	symbolplacesymbol	14
1.64	symbolexplodesymbol	15
1.65	snapmgrid	15
1.66	}	15
1.67	snapmdirec	15
1.68	tool_snapdirnone	15

1.69	tool_snapdirortho	15
1.70	tool_snapdirortho45	16
1.71	snapmobjec	16
1.72	tool_snapobjnone	16
1.73	tool_snapobjpoint	16
1.74	tool_snapobjmidpoint	16
1.75	Menu: Project	16
1.76	Menu: Project/New	17
1.77	Menu: Project/New Window	17
1.78	Menu: Project/Open...	17
1.79	Menu: Project/Close	17
1.80	Menu: Project/Save	17
1.81	Menu: Project/Save as	17
1.82	Menu: Project/Print Setup	18
1.83	Requester: Print Setup	18
1.84	Menu: Project/Print	18
1.85	Menu: Project/About	18
1.86	Menu: Project/Quit	18
1.87	Menu: Edit	19
1.88	Menu: Edit/Cut	19
1.89	Menu: Edit/Copy	19
1.90	Menu: Edit/Paste	19
1.91	Menu: Edit/Select All	19
1.92	Menu: View	20
1.93	Menu: View/Zoom In	20
1.94	Menu: View/Zoom In By Factor	20
1.95	Menu: View/Zoom All	20
1.96	Menu: View/Zoom Out By Factor	20
1.97	Menu: View/Pan	21
1.98	Menu: View/Redraw	21
1.99	Menu: View/Save view	21
1.100	Menu: View/Views	21
1.101	Menu: View/Coordinates and Snap Bar	21
1.102	Menu: View/Text Information Bar	21
1.103	Menu: View/Tools Palette	21
1.104	Menu: View/Color Palette	21
1.105	Requester: Color Palette	22
1.106	Menu: View/Hatch Palette	22
1.107	Requester: Hatch Palette	22

1.108Menu: Information	22
1.109menu_project	22
1.110req_project	22
1.111menu_layers	23
1.112req_layers	23
1.113menu_entities	23
1.114req_entities	23
1.115menu_selectfont	23
1.116menussymbo	24
1.117menu_placesymbol	24
1.118menu_createsymbol	24
1.119menu_explodesymbol	24
1.120menusetti	24
1.121menu_showgrid	25
1.122menu_createicons	25
1.123menu_workbench	25
1.124menu_screenmode	25
1.125menu_colors	25
1.126req_colors	25
1.127menu_grid	26
1.128req_grid	26
1.129menu_units	26
1.130req_units	26
1.131menu_zoom	26
1.132req_zoom	26
1.133menu_loadsettings	26
1.134menu_savesettings	27
1.135savesettingsas	27
1.136menuslines	27
1.137menushelp	27
1.138menu_help	27
1.139menu_usingmagnificadhelp	27
1.140menu_index	28
1.141menu_whatsnew	28
1.142appusing	28
1.143appusiautoc	28
1.144appspeed	28
1.145appkeybo	29
1.146index	29
1.147howdoi	36
1.148whatsnew	36
1.149usingmagnificadhelp	37

Chapter 1

MagnifiCAD_help

1.1 MagnifiCAD Help v1.1

MagnifiCAD v1.1 Online Help

(C)1995-96 Anders Granli. All rights reserved.

CONTENTS

[Introduction](#)

[Screen Elements](#)

[Types of drawing tools](#)

[Generating elements](#)

[Topological levels](#)

[Picking](#)

[Delete](#)

[Geometric Transformations](#)

[Element Attributes](#)

[Symbols](#)

[Snap Modes](#)

[Menus](#)

APPENDICES

[Using MagnifiCAD with other programs](#)

[Speed Issues](#)

[Keyboard Shortcuts](#)

[Index](#)

[How Do I...?](#)

[Whats New in 1.1?](#)

1.2 secintro

Introduction

Welcome to MagnifiCAD. MagnifiCAD is a computer-aided design program, which allows you to produce drawings in 2D with the help of a variety of tools.

MagnifiCAD supports different line styles, hatching, colors, and can exchange files with other CAD packages supporting the DXF file format.

[System Requirements](#)

[Registration](#)

[Drawing elements and their representation](#)

1.3 secscreen

Screen Elements

The default MagnifiCAD screen setup consists of two windows: the Tools Palette and a Project Window. In addition to these, other palettes can also be displayed.

[Tools Palette](#)

[Project Window](#)

1.4 sectypes

Types of drawing tools

The tool palette contains all the tools you need to draw. The tools are divided into modifiers and operators.

[The drawing modifier tools](#) are the element generation modifiers and the self/copy modifiers.

[The drawing operators](#) are the element generation tools, pick/delete tools, geometric transformations and attribute assignments.

1.5 secgener

Generating elements

The drawing tools are used to create different drawing elements. When you select a tool, instructions will be shown in the text information bar about what the tool does.

Any time during a drawing operation, you can press the right mouse button to cancel the process. The rubberbanding will be deleted from the screen.

The Shift keys can be used to close a polyline or a polycurve.

1.6 secpicki

Picking

When the user wants to edit an object, that is, apply a transformation or delete it, the object must be picked.

[Prepick and Postpick](#)

[The Pick Tool](#)

[Unpicking](#)

1.7 secdelet

Delete

Delete is used when an element is to be erased from the project.

[The Delete Tool](#)

1.8 secgeome

Geometric Transformations

The Geometric Transformations operate on an element to change its geometry. The Self/Copy modifiers affect the transformations.

[The Self/Copy Modifiers](#)

[The Geometric Transformations](#)

[Transforming Objects](#)

1.9 seceleme

Element Attributes

All the drawing elements have attributes that can be set and changed. These attributes are color, line style, line weight, hatch and the layer they are in.

Some elements are affected by all these attributes, and some are affected by some of them, as shown in the table below.

Color Style Weight Hatch Layer

Polyline o o n/a o o

Polycurve o o n/a o

Rectangle o o n/a o o

Polyform o o n/a o o

Circle o o n/a o

Ellipse o o n/a o

Arc o o n/a o

Text o n/a o

Symbol o n/a o

[Setting the element attributes](#)

1.10 secsymbo

Symbols

Symbols are used in a drawing to represent elements that are repetitioned. They can be used to standard symbolic representation like doors, windows, furniture, etc. in drawings.

Symbols are not affected by the hatch attribute, and they may not be rotated.

[Creating Symbols](#)

[Placing Symbols](#)

[Exploding Symbols](#)

1.11 secsnapm

The Snap Modes

The Snap modes determine what happens to the input coordinates, if they are adjusted (snapped), and to where. When an input point is snapped, the actual coordinate recorded is changed to fit the current snap mode.

Grid snap

Directional snap

Object snap

1.12 secmenus

The Menus

From the menus the user can access all the functions not covered in the tools palette.

Project Menu

Edit Menu

View Menu

Information Menu

Symbols Menu

Settings Menu

Lines Menu

Help Menu

1.13 introsyste

System Requirements

MagnifiCAD requires:

- o An Amiga with Workbench 3.0 or above, preferably with a 68020 processor.
- o about 1MB free memory.

MagnifiCAD can run with only about 300K memory free, but will need more memory for large projects.

The size of the projects is limited only by how much free memory you have in your Amiga.

1.14 introregis

Registration

MagnifiCAD is a ShareWare program and may be distributed freely. No charge may be taken other than the cost of distribution. This version was released 01.06.95, and is restricted to 2D drawing.

To become a registered user of MagnifiCAD and get the latest version, please send £13/\$20 to:

Anders Granli

Øvre Møllenberg gate 64

N-7043 Trondheim

NORWAY

phone: +47 73522846

e-mail: granli@stud.unit.no

www: <http://www.stud.unit.no/~granli/>

Comments, wishes for the next version & bug reports for this version are welcome, preferably by e-mail. For more information about registration, printed manuals for the program and the next version of MagnifiCAD, please look at the 'Registration' file, or mail me.

1.15 introdrawi

Drawing elements and their representation

MagnifiCAD has four different types of drawing elements: polylines, arcs, text and symbols.

The polylines and the arcs are the common drawing elements, they are the real elements that make up a drawing. The other two types, text and symbols, play a supporting role in a drawing.

A polyline is a series of connected line segments, and may be open or closed. A polyline may consist of only one line segment. A special polyline type, the rectangle, is constrained to preserve its rectangular shape.

An arc is represented by the parameters that are used to generate it, not by line segments such as in polylines. An arc can be open (a partial circle) or closed (a full circle or ellipse).

Text elements consists of a character string and can only be placed horizontally.

Symbols are elements composed of several other elements and are useful for repetitions. When the symbols are created, they are placed in a library of symbols, from which they may be retrieved and repeatedly placed in a drawing as many times as necessary

1.16 screentools

The Tools Palette

The tools palette contains all the tools you use to draw and modify entities.

Line Mode

Enclosure Mode

Polycurve

Polyline

Rectangle

3-point Rectangle

Circle

Ellipse

Arc

Counter-clockwise Arc

Text

Polygon

Element

Segment

Point
Delete
Pick
Self
Copy
Move
Rotate
Scale
Mirror
Set Color
Set Hatch
Set LineStyle
Set LineWeight
Set Layer
Set All

1.17 screenproje

The Project Window

The Project Window consists of several components, such as:

The Window Border - where the projects name and the current layer will be displayed, and where you can resize and move the window as a normal Intuition window.

The Coordinates and Snap Bar - where you can see the current coordinate, the angle, and select different types of snaps to be applied to the input points.

The Drawing Field - where the projects elements will be shown.

The Text Information Bar - where text information about tools is displayed.

1.18 projwinborder

The Project Window Border

The border of the project window contains the name of the current project, the current working layer, and scrollers used to move the current view. There are two scrollers, one for vertical and one for horizontal movement.

1.19 projwincoordsnapbar

The Project Window Coordinates and Snap bar

The coordinates and snap bar contains information about the current input point and the tools to affect the input points.

Coordinates

The coordinate gadgets shows the coordinates of the current position on screen. This will be absolute values, except when in the middle of a drawing operation, when the coordinates will be relative to the first input point.

The user can also type in values in these gadgets, instead of using the mouse to select points.

The angle gadget shows the current angle. This angle will be measured from the rightmost end of a circle, except when in the middle of some drawing operations, when it will be measured from the line between the first and second input point.

Snap gadgets

The snap modes determine how the input points will be selected. The modes are divided into three groups, called Grid Snap, Directional Snap and Object Snap.

1.20 projwinfield

The Project Window Drawing Field

The drawing field is where you build up your project or drawing. The current drawing mode is selected and shown in the Tools Palette.

The current coordinate is shown and the snap mode is selected in the Coordinates and Snap Bar.

1.21 projwintextbar

The Project Window Text Information Bar

The Text Information Bar will show instructions about which tool that is active, and what operation the next mouseclick will perform.

1.22 typesmodif

The drawing modifiers

The modifier groups occupy one row in the tools palette each.

The Element Generation Modifiers

These modifiers occupy the first row of the tools palette. They determine which type of element the drawing operators will generate. The two types are **Line mode** and **Enclosure Mode**.

The Topological levels

The topological levels are on the 7th and 8th row of the tools palette. They determine what topological level to work at, i.e. element, segment or point. All transformations done to the selected elements, segments or points are affected by the topological levels.

The Self/Copy Modifiers

These modifiers occupy the tenth row of the tools palette. They determine whether geometric transformations will be applied to the original object (**Self**) or a copy of the object (**Copy**).

1.23 typesopera

The drawing operators

The second group in the tools palette contains the drawing tools. These generate line or enclosure elements, depending on the active element generation modifier.

Draw Polyline

These tools draw open or closed polylines. This may be **polylines** or **polycurves**.

Draw Polygon

These tools draw polygons. This may be **rectangle**, **3-point rectangles** or **n-sided polygons**.

Draw Arc

These tools draws open or closed arcs. This may be **arcs**, **circles** or **ellipses**.

Pick

This tool is used to select elements. It allows elements to be prepicked, so that an operation may be applied to an element afterwards.

Delete

This tool is used to delete elements.

Geometric Transformations

These tools is used to apply geometric transformations to elements. The available transformations are move and rotate. They operate either on the selected elements or copies of these. This is determined by current state of the Self/Copy modifiers.

Attribute Assignment

These tools are used to assign attributes to drawn elements. The available attributes are color, line style, line weight, hatch and layer.

1.24 tool_linemode

Line Mode Tool

When Line Mode is selected, all elements will be generated with simple lines making up the element.

1.25 tool_enclosuremode

Enclosure Mode Tool

When Enclosure Mode is selected, all elements will be generated with two parallel lines all the time, making a kind of enclosure. This is very useful for drawing walls etc.

1.26 tool_polyline

Polyline Tool

It draws a sequence of lines, linked to each other, by selecting a sequence of points. After the first point is selected, the first line segment will be rubberbanded. The next selected point will end the first segment and begin rubberbanding another.

The sequence is terminated by double-clicking the mouse.

Double-clicking to end the polyline will draw an open shape, with the endpoint where you double-clicked the mouse. You can hold down either of the shift keys on your keyboard while double-clicking to make a closed shape.

The point where you double-clicked will then be joined to the starting point of the polyline, closing the shape.

1.27 tool_polycurve

Polycurve Tool

This tool is used to draw curved lines. It is used just like the Polyline tool, except that the line drawn is a smooth curve through the points defined.

The Polycurve can not be closed like the polyline.

1.28 tool_arc

Clockwise Arcs Tool

It draws an arc using three input points. The first point is the center of the arc. The second point defines the start point and the third defines the end point of the arc.

A circle will be rubberbanded when you have selected the center, and it will change to an arc when you select the start point.

The number of segments the arc consists of, can be changed in the [Circle/Ellipse/Arc Options requester](#).

1.29 tool_counterarc

Counter-clockwise Arc Tool

The counter-clockwise arcs is drawn as the clockwise arcs, except that they are drawn in counter-clockwise direction.

The number of segments the arc consists of, can be changed in the [Circle/Ellipse/Arc Options requester](#).

1.30 tool_circle

Circle Tool

It draws a circle from two input points. The first point is the center, and the second point is the radius. The circle is rubberbanded after you have selected the center point.

The number of segments the circle consists of, can be changed in the [Circle/Ellipse/Arc Options requester](#).

1.31 req_ceaoptions

The Circle/Ellipse/Arc Options Requester

This requester handles the options for the circle, ellipse and arc tools.

Of Segments - The number of segments required can be entered in this numeric field. The number must be greater than 6. The default number of sides is 48.

1.32 tool_ellipse

Ellipse Tool

It draws an ellipse from two input points. The first point is the center, and the second point is any point on the circumference of the ellipse. After the center point is selected, the ellipse is rubber-banded.

The number of segments the ellipse consists of, can be changed in the [Circle/Ellipse/Arc Options requester](#).

1.33 tool_rectangle

Rectangle Tool

It draws a rectangle from two input points that represents two diagonally opposite corners of the rectangle. After the first point is selected, the rectangle will be rubber banded until you select the second point.

The input points can be any pair of opposite corners of the rectangle. The rectangle may be a square or a plain rectangle.

The sides of the rectangle are restricted to being parallel with the x and y axes of the coordinate system.

1.34 tool_rectangle3

3 Point Rectangle Tool

It draws a rectangle from three input points. The first point is represents one corner of the rectangle, the second determines the angle of one of the rectangle sides, and he third is the corner point opposite of the first.

The rectangle will be rubber-banded after selecting the first 2 points.

The rectangle may be a square or a plain rectangle.

1.35 tool_polygon

Polygon Tool

It draws a polygon from two input points. These points represent the center og the polygon and the radius of the circle the polygon is inscribed in.

When you select the center point, the polygon will be rubber banded until you select the radius and direction. By default this tool creates a hexagonal shape.

The number of sides the created polygon will have can be changed in the [Polygon Options requester](#). You invoke this requester by holding down either of the shift keys while selecting this tool.

1.36 req_polyoptions

The Polygon Options Requester

This requester handles the options for the polygon tool.

Of Segments - The number of sides required can be entered in this numeric field. The number must be greater than 2. The default number of sides is 6.

1.37 tool_text

Text Tool

The Text Tool draws text. You specify one input point, which is the start position of the text. When selected, a requester will pop up and let you type the text. Press Return and OK in the requester, and the text will be displayed.

The Text can be moved and copied as other elements, but not rotated. It will always be drawn parallell with the x-axis.

The Font and String can be changed in Entity Info requester.

1.38 topolevel

Topological levels

Topological levels are used for editing or erasing parts of an element. All transformations done to an element is affected by the current topological level.

1.39 tool_element

The Element Level Tool

At element level, all operations work on the whole element. When picking, the whole element is picked, and when transforming, the whole element is transformed.

1.40 tool_segment

The Segment level Tool

At segment level, all operations work on a segment, or more specifically a line, of the element.

1.41 tool_point

The Point level Tool

At point level, all operations work on a point in the element.

1.42 pickiprepi

Prepick and Postpick

An object may be prepicked or postpicked. Using Prepick, select the object (using the Pick Tool) first, and then apply the operation. With Postpick, you can select an operation, and then pick the objects to be affected.

1.43 tool_pick

Pick Tool

The Pick Tool allows you to select elements on screen by various methods.

You can select one or more elements with this tool.

- Clicking on any part of an element selects it.
- Clicking on any part of an entity, while holding down the SHIFT key, selects this in addition to any already selected elements.
- Clicking outside any element deselects all elements.
- Clicking and holding down the left mouse button while dragging the mouse produces a rectangle. All elements within this selection rectangle will be selected when you release the button.

When an element is selected, it is highlighted in the current selection color.

1.44 pickiunpic

Unpicking

To unpick or deselect objects, click outside any objects in the project window while in Pick Mode.

Selecting a new topological level also unpicks all selected elements.

1.45 tool_delete

Delete Tool

This tool deletes the selected element or elements.

It works with both the prepick and postpick methods. With the postpick method, the Delete Tool is selected first, and then the entities are selected and deleted.

With the prepick method, all the elements are selected first, and when the Delete Tool is selected, all selected elements are deleted. Selected elements can also be deleted by pressing the 'Del' button on the keyboard.

1.46 geomemodif

The Self/Copy Modifiers

The Self/Copy modifiers control whether the transformations are applied to the selected object or to a copy of it.

Self

Copy

1.47 tool_self

Self Mode

When the Self mode is active, all geometric transformations will be applied to the selected element.

1.48 tool_copy

Copy Mode

When the Copy mode is active, all geometric transformations will be applied to a copy of the selected element.

A new copy of the selected element is made for each subsequent mouse click.

1.49 geometrans

The Geometric Transformation Tools

The Geometric Transformation Tools are used to transform or change already drawn entities.

Move

Rotate

Scale

Mirror

1.50 tool_move

Move Tool

The Move Tool allows you to move one or more entities. The entities must be pre-picked with the pick tool.

To move the selected entities, select a point as your reference. This point can be anywhere, but preferably it is one of the entities points. When this point is selected, you can drag the entity or entities to the destination point and click to move.

1.51 tool_rotate

Rotate Tool

The Rotate Tool allows you to rotate one or more entities. The entities must be pre-picked with the pick tool.

To rotate the selected entities, select a point as your reference. The entities will be rotated around this point. When selected, you can drag the entities to their new positions and click to end the operation.

1.52 tool_scale

Scale Tool

The scale tool lets you scale the elements, making them bigger or smaller. The elements must be pre-picked using the Pick tool. To scale a selected element, select one point as the point to scale from (a fixed point). Then drag out a line to use as 100%, and select a new point. The element will now be rubberbanded and is scaled according to your movement of the mouse. Click once when the right scale is shown.

1.53 tool_mirror

Mirror Tool

The mirror tool lets you mirror an element around a line. The element must be pre-picked using the Pick tool.

You must select two points, defining a line in the direction you want the element to be mirrored. It will be mirrored around a line at a 90 degree angle to the line you define.

When you have selected the two points, the element will be rubberbanded, following your mouse movements. Click once to mirror the element when it is in the right position.

THIS TOOL IS NOT SUPPORTED IN THIS VERSION

1.54 geomeobjec

Transforming Objects

All elements support both the transformations above, except the Text and Symbol elements. These can only be moved, not rotated. If a rotation is applied to a Text element, only the starting point of the Text will be rotated/moved.

1.55 elemesetti

Setting the element attributes

When new elements are drawn, they will have the attributes currently set. These attributes are color, line style and line weight. They will also be placed in the currently active layer.

The hatch attribute must be set explicitly.

After an element has been drawn, these attributes may be changed by using the attribute setting tools, found at the bottom of the Tools Palette.

Set Color

Set Hatch

Set Line Style

Set Line Weight

Set Layer

Set All

1.56 tool_setcolor

Set Color Tool

This tool changes the color of the selected element to the current selected color.

The currently selected color can be changed by selecting a new color in the [Color Palette](#).

1.57 tool_setlinestyle

Set Line Style Tool

This tool changes the line style of the selected element to the current selected line style.

The currently selected line style can be changed in the Line Menu.

1.58 tool_setlineweight

Set Line Weight Tool

This tool changes the line weight (or line width) of the selected element to the current selected line weight.

The currently selected line weight can be changed in the Line Menu.

NOT SUPPORTED IN THIS VERSION

1.59 tool_sethatch

Set Hatch Tool

This tool allows you to hatch elements on screen by selecting them by the same methods as in Pick.

The elements will be hatched with the currently selected hatch type, which can be selected in the [Hatch Palette](#).

1.60 tool_setlayer

Set Layer Tool

This tool lets you change the layer of the selected element to the current layer.

The current layer can be changed in the [Layers requester](#).

1.61 tool_setall

Set All Tool

This tool lets you change all the attributes of an element.

This means that the Color, Line Style, Line Weight, Hatch and Layer of the entity will be set to the current values.

1.62 symbolcreatesymbol

Create Symbol

This creates a symbol from the currently selected entities. This tool works only with prepicked elements.

The symbol will be saved in a symbol file with the name the user supplies.

1.63 symbolplacesymbol

Place Symbol

This tool is used to place a symbol in a project. A requester appears and lets the user select the appropriate symbol. This symbol is loaded and the user may move it around and place it in the project window.

1.64 symbolexplodesymbol

Explode Symbol

This tool is used to explode a symbol into its different elements. A symbol must be selected for this tool to be effective.

When selecting this tool, the symbol will be replaced by the individual elements that form the symbol. These elements can then be edited by themselves.

1.65 snapmgrids

Grid snap

The grid snap snaps the input point to the closest point on the reference grid.

Grid Snap Switch

1.66 }

Grid Snap Switch

Toggles the grid snap mode on and off. When Grid Snap mode is on, snapping occurs to the closest point on the reference grid, as defined in the Grid Settings requester.

Note that this mode may be overruled by the directional or object snap modes.

1.67 snapmdirec

Directional snap

The directional snap modes snap the input coordinate to the closest direction (by angle).

None

Orthogonal

Orthogonal 45

1.68 tool_snapdirnone

None

Turns off any directional snap.

Note that the directional snap modes may be overruled by the object snap modes.

1.69 tool_snapdirortho

Orthogonal

When orthogonal snapping is active, snapping occurs to a line parallel with either the x or y axis.

Note that the directional snap modes may be overruled by the object snap modes.

1.70 tool_snapdirortho45

Orthogonal 45

When orthogonal 45 snapping is active, snapping occurs to a line 45 degrees to either the x or y axis.

Note that the directional snap modes may be overruled by the object snap modes.

1.71 snapmobjec

Object snap

The object snap modes snaps to the closest point in an element.

None

Point

Midpoint

1.72 tool_snapobjnone

None

Turns off any object snap.

1.73 tool_snapobjpoint

Point

When snap to point is active, snapping occurs to the closest point which is in an element.

Note that the object snap modes overrules all other snap modes.

1.74 tool_snapobjmidpoint

Midpoint

When snap to midpoint is active, snapping occurs to the closest midpoint which is on a line in an element.

This mode will also snap to the center of circles, ellipses and arcs.

Note that the object snap modes overrules all other snap modes.

1.75 Menu: Project

Project Menu

The Project Menu contains everything that has to do with opening and closing projects and files.

New

New Window

Open...

Save

Save As...

Close

Print Setup...

Print

About

Quit

1.76 Menu: Project/New

New

This opens a new project. If the current open project is changed, you will be asked if you want to save before opening a new project.

Preferences will be read from the current preferences file.

1.77 Menu: Project/New Window

New Window

This opens a new window unto the current project.

NOT AVAILABLE IN THE CURRENT VERSION.

1.78 Menu: Project/Open...

Open...

This displays the filerequester and lets the user select a new project to load.

If the current open project is changed, you will be asked if you want to save before opening a new project.

1.79 Menu: Project/Close

Close

Closes the current project.

If the current open project is changed, you will be asked if you want to save before opening a new project.

1.80 Menu: Project/Save

Save

Saves the current project with the current filename.

1.81 Menu: Project/Save as

Save as

Opens a save requester and allows you to type in a new name for this project, and saves it under this name.

1.82 Menu: Project/Print Setup

Print Setup...

Displays the **Print Setup requester** and lets you print the current project.

1.83 Requester: Print Setup

The Print Setup Requester

This requester lets you change the print setup settings.

Print Scale - The scale of the printed drawing.

Print Direction - Sets the printing to either Landscape or Portrait.

Print Type - Determines what part of the project that is to be printed. If Extents, everything will be printed. If Current View, the part of the project that is shown in the project window will be printed.

Options:

Print Grid - If checked, print the reference grid.

Print Axis - If checked, print the reference axis.

Print Border - If checked, a thin border will be printed around each page when printing.

Print - Print with the current options.

Preview - Show a preview of the printout.

1.84 Menu: Project/Print

Print

Prints the current project with the selections set in the **Print Setup requester**.

1.85 Menu: Project/About

About

This displays the 'About' requester, where you can see the program credits and information about how much memory that is available.

1.86 Menu: Project/Quit

Quit

This quits MagnifiCAD.

If the current open project is changed, you will be asked if you want to save before the program ends.

1.87 Menu: Edit

Edit Menu

The items in the Edit Menu lets you cut and paste elements in a project and between different projects. It also has an item for selecting all elements in a project.

Cut

Copy

Paste

Select All

1.88 Menu: Edit/Cut

Cut

This deletes the selected elements from the project and stores them in the clipboard, ready for a **Paste** operation. The clipboard can hold any number of elements.

If there are old elements in the clipboard (from another Cut or Copy operation), they will be replaced by the new elements.

1.89 Menu: Edit/Copy

Copy

This copies the selected elements into the clipboard, replacing anything already there. It is the same as **Cut**, except it does not delete the elements from the project.

1.90 Menu: Edit/Paste

Paste

This pastes a copy of the elements in the clipboard into the project. The elements to be copied will be follow the position of the mouse until the mouse is clicked to position them.

The elements will not be removed from the clipboard, so the Paste command can be used many times to paste many copies of the same elements into the project.

The contents of the clipboard will not be deleted when closing a project and opening a new one, so it can be used for copying elements from one project to another.

1.91 Menu: Edit/Select All

Select All

This selects all the elements in a project. Elements in a layer that is not shown will not be selected.

1.92 Menu: View

View Menu

The items in the view menu lets you change the view you have of the project, zoom in and out, and save a specific view for later.

Zoom In

Zoom In By Factor

Zoom All

Zoom Out By Factor

Pan

Redraw

Save View

Views...

Coordinates and Snap Bar

Text Information Bar

Tools Palette

Color Palette

Hatch Palette

1.93 Menu: View/Zoom In

Zoom In

This lets you zoom in by drawing a rectangle which defines the bounds of the zoom.

1.94 Menu: View/Zoom In By Factor

Zoom In By Factor

This calculates a new view based on the values in the Zoom Settings requester.

It zooms in by the number set in the Zoom Factor gadget in the [Zoom Settings requester](#).

1.95 Menu: View/Zoom All

Zoom All

This zooms out until all elements are fully visible in the current project window.

1.96 Menu: View/Zoom Out By Factor

Zoom Out By Factor

This calculates a new view based on the values in the [Zoom Settings requester](#).

It zooms out by the number set in the Zoom Factor gadget in the Zoom Settings requester.

1.97 Menu: View/Pan

Pan

This lets you move the current view by drawing a line with the length and direction that the view moves.

1.98 Menu: View/Redraw

Redraw

This redraws the project with the current view.

1.99 Menu: View/Save view

Save View

This lets you type in a name for the current view and saves it in the view list.

1.100 Menu: View/Views

Views...

Shows the view list and lets you select a new view.

1.101 Menu: View/Coordinates and Snap Bar

Coordinates and Snap Bar

Show or hide the Coordinates and Snap Bar. When the Coordinates and Snap Bar is shown, this item will be marked.

1.102 Menu: View/Text Information Bar

Text Information Bar

Show or hide the Text Information Bar. When the Text Information Bar is shown, this item will be marked.

1.103 Menu: View/Tools Palette

Tools Palette

Show or hide the Tools Palette. When the Tools Palette is shown, this item will be marked.

1.104 Menu: View/Color Palette

Color Palette

Show or hide the **Color Palette**. When the Color Palette is shown, this item will be marked.

1.105 Requester: Color Palette

Color Palette

This requester lets you select the current color. Select a color to make it the current selected color.

1.106 Menu: View/Hatch Palette

Hatch Palette

Show or hide the **Hatch Palette**. When the Hatch Palette is shown, this item will be marked.

1.107 Requester: Hatch Palette

Hatch Palette

This requester lets you select the current hatch. There are 16 different hatches available, from plain solid to a brick-like hatch. Select the one you require by clicking on it. It will be depressed to show that it is selected.

1.108 Menu: Information

Information Menu

The Information Menu contains items that shows the user information about the project, its layers, and its elements.

Project...

Layers...

Entities...

Select Font...

1.109 menu_project

Project...

This displays the **Project requester**. In this requester you can change the name of the project and the file type.

1.110 req_project

The Project Requester

This requester lets you change the project name and file type.

Name - The project's name.

File Type - The file type the project is saved in. The file types currently supported are:

MagnifiCAD

AutoCAD DXF 2D

For more information about these filetypes, see Appendix A.

Creation Date - the creation date of the project will be shown here. This can not be edited.

Calculate Statistics - the statistics for the project (number of elements, segments and points) will be calculated when clicking this gadget.

1.111 menu_layers

Layers...

This displays the **Layers requester**. In this requester you can change number, name and status for each layer.

You change the active layer by clicking in the list of layers.

1.112 req_layers

The Layers Requester

This requester shows the layer list of the current project. You can add or delete layers, and change layer attributes.

Layer List:

Add - Add a new layer to the layer list.

Delete - Delete the currently selected layer.

Current Layer:

Number - The layers number.

Name - The layers name.

State - The layers state, either Show or Hide. When Show is selected, the layer's entities will be drawn.

1.113 menu_entities

Entities...

This displays the **Entity Info requester**, which shows information about the selected entity. You can change information from this Entity Info requester.

If there is more than one entity selected, selecting this item will do nothing.

1.114 req_entities

The Entity Info Requester

This requester shows some information about the selected entity.

All entities:

Type - This shows the entity type. This can not be changed.

Layer - This shows the current layer the element is drawn in. Type in a new existing layer number to change the element's layer.

Text:

String - The text that is drawn. This can be changed by editing the string.

Change Font... - Set a font specifically for this element. The font will be selected from the fonts requester.

Symbol:

Name - The name of symbol. This can be changed by typing a new name.

1.115 menu_selectfont

Select Font...

This displays the font requester and allows you to change another font than the default one to use as the selected entities text.

1.116 menussymbo

Symbols Menu

The Symbols menu contains items to let you create, place and explode symbols.

Place Symbol...

Create Symbol...

Explode Symbol

1.117 menu_placesymbol

Place Symbol...

Shows a requester, allowing you to choose the symbol you want to place in the project.

The symbol automatically follows the mouse pointer so you can move it around the screen and place it wherever you like.

1.118 menu_createsymbol

Create Symbol...

This saves the selected entities as one symbol, with the filename you enter in the save requester.

1.119 menu_explodesymbol

Explode

A symbol must be selected for this option to have any effect.

The symbol will be exploded into its different entities.

1.120 menussetti

Settings Menu

The items in the settings menu lets you change all the settings in MagnifiCAD, and save this in a preference file.

Show Grid

Create Icons?

Workbench

Screen Mode...

Colors...

Grid...

Units...

Zoom...

Load Settings...

Save Settings

Save Settings As...

1.121 menu_showgrid

Show Grid

Selecting this item will toggle it on or off. When on, the grid, as defined in the Grid Settings requester, will be displayed.

1.122 menu_createicons

Create Icons

Selecting this item will toggle it on or off. When on, an icon of the appropriate type will be created for each file you save.

1.123 menu_workbench

Workbench

Select this item to Open or Close the Workbench screen.

The state of the Workbench Screen will be reflected in the checkmark. The Workbench will not always be closed when selecting this item, therefore it will not always seem to do anything.

The Workbench Screen can be closed to save memory.

Be aware that selecting Workbench/Close doesn't always mean that the Workbench screen actually will be closed.

1.124 menu_screenmode

Screen Mode...

This displays the screenmode-requester and lets the user change screen resolution and depth (number of colors on screen).

The screen modes currently supported by MagnifiCAD is:

- o HIRES
- o HIRES INTERLACE
- o SUPERHIRES
- o SUPERHIRES INTERLACE

Both PAL and NTSC modes are available.

Colors from 16 to 256 is supported.

1.125 menu_colors

Colors...

This shows the **Color Setting Requester** and lets you edit the colors.

1.126 req_colors

The Color Settings Requester

This requester shows the color settings.

Color Wheel - drag the knob around the edit the current color.

Color Slider - drag the knob up (to make the color brighter) or down (to make the color darker).

Color Palette - select a color here to make it the current color to edit.

1.127 menu_grid

Grid...

This shows the **Grid Settings requester** and lets you change the grid settings.

1.128 req_grid

The Grid Settings Requester

This requester shows the grid settings.

Grid Spacing - The spacing of the points or lines in the reference grid. If the spacing equals less than 2 pixels on the screen in the current view, they will not be drawn.

Type - When set to Dot grid, only the points in the reference grid will be drawn. When set to Line grid, continuous lines will be drawn as the reference grid.

1.129 menu_units

Units...

This shows the **Units Settings requester** and lets you change the units settings.

1.130 req_units

The Units Settings Requester

This requester shows the Units settings.

Units - The base units which all measures are made in. The base unit is used when calculating scale.

1.131 menu_zoom

Zoom...

This shows the **Zoom Settings requester** and lets you change the zoom settings. They affect how the view is zoomed when using one of the zoom commands.

1.132 req_zoom

The Zoom Settings Requester

This requester shows the zoom settings.

Zoom Factor - This is the factor that is used in calculating new views when selecting Zoom In By Factor or Zoom Out By Factor.

Always Zoom By Factor - When checked, the Zoom Factor is used in all zooming operations, i.e. Zoom All and Zoom In. These operations will then always scale by Zoom Factor.

1.133 menu_loadsettings

Load Settings...

This lets you change the settings by loading a previously saved settings file from disk.

1.134 menu_savesettings

Save Settings

This saves the settings in the currently defined file.

1.135 savesettingsas

Save Settings as...

This saves the settings in a file with a filename selected by the user.

1.136 menulines

Lines Menu

In this menu you can select the current Line Style and the current Line Weight.

A selection mark will show the current Line Style and the current Line Weight.

LINE WEIGHT NOT SUPPORTED IN THIS VERSION.

1.137 menushelp

Help Menu

In this menu you can get help from the online help included in MagnifiCAD.

[Help](#)

[Using MagnifiCAD Help](#)

[Index](#)

[What's New in 1.1?](#)

1.138 menu_help

Help

This opens the online help and displays the main help page. From this page you can select different topics.

[go to the 'Contents' page](#)

1.139 menu_usingmagnificadhelp

Using MagnifiCAD Help

This shows the 'help about help' page, where the different ways of getting help are listed.

[go to the 'Using MagnifiCAD Help' page](#)

1.140 menu_index

Index

This shows the help index, with an entry for all topics and keywords on which there is information in the online help section.

[go to the 'Index' page](#)

1.141 menu_whatsnew

What's new in 1.1?

This shows the information about new features in this version.

[go to the 'What's New in 1.1?' page](#)

1.142 appusing

Appendix A: Using MagnifiCAD with other CAD programs

MagnifiCAD can be used in conjunction with other CAD type programs, both on the Amiga and on other platforms. Use one of the supported file formats to transfer a project into another program.

Supported File Formats

The only currently supported file format is the DXF drawing files.

[AutoCAD DXF 2D](#)

1.143 appusiautoc

AutoCAD DXF 2D

MagnifiCAD reads and writes AutoCAD DXF files. This is the most standard filetype for CAD drawings, and may be imported into a variety of packages.

The supported entities are:

LINE

POLYLINE

CIRCLE

ARC

TEXT

MagnifiCAD reads the HEADER section, the TABLES section (currently, the only table supported is LAYER), and the ENTITY section, and skips the rest.

1.144 appspeed

Appendix B - Speed and Memory Issues

MagnifiCAD is supposed to work decently on an unexpanded A1200, but it will be rather slow. To speed things up a bit, there are several things that can be done.

- Select the normal HIRES screenmode, without interlace, and with few colors (16).

· Close the color and hatch palettes.

MagnifiCAD runs with just 300K free memory, but allocates memory for each element added to a project. An unexpanded A1200 has 2 megabytes of memory. This should be enough for quite large projects. If you run out of memory, try closing other programs that are running and choose a screenmode with low resolution.

The amount of free memory available can be checked by choosing About in the Project menu.

1.145 appkeybo

Appendix C - Keyboard Shortcuts

All keyboard shortcuts consists of pressing the Amiga Key(A) and another key, as shown in the table below.

Key

(A+) Does

A Save as... (Project Menu)

C Copy (Edit Menu)

E Entity Info (Information Menu)

H Help (Help Menu)

I Zoom In (View Menu)

L Layers (Information Menu)

N New (Project Menu)

O Open (Project Menu)

P Print (Project Menu)

Q Quit (Project Menu)

R Redraw (View Menu)

S Save (Project Menu)

U Zoom Out (View Menu)

V Paste (Edit Menu)

W Views (View Menu)

X Cut (Edit Menu)

1.146 index

Appendix D - Index

A

About

Arc

AutoCAD DXF 2D

B

C

Circle

Circle/Ellipse/Arc options requester

Close

Colors command

Color setting requester

Color palette

Color palette

Coordinates and snap bar

command

Copy

Copy Mode

Counter-clockwise arc

Create icons?

Create symbol

Creating symbols

Cut

D

Delete

command

tool

Directional snap

Drawing elements and their representation

Drawing field

Drawing modifiers

Drawing operators

E

Edit menu

copy

cut

paste

select all

Element

Element attributes

Ellipse

Enclosure mode

Entity info requester

Entities command

Explode symbol

Exploding symbols

F

G

Generating elements

Geometric transformations

Geometric transformations

Grid command

Grid settings requester

Grid snap

Grid snap switch

H

Hatch palette

Hatch palette

Help

Help menu

help

index

using magnifiCAD help

How do I...?

I

Information menu

entities

layers

project

select font

Introduction

J

K

Keyboard shortcuts

L

Layers command

Layers requester

Line mode

Lines menu

Load settings

M

Menus

Edit Menu

Help Menu

Information Menu

Lines Menu

Project Menu

Settings Menu

Symbols Menu

View Menu

Midpoint snap

Mirror

Move

N

New

New window

O

Object snap

Open

Orthogonal snap

Orthogonal 45 snap

P

Palettes

Color Palette

Hatch Palette

Pan

Paste

Pick

Picking

Pick tool

Place symbol

Placing symbols

Point snap

Point tool

Polycurve

Polygon

Polygon options requester

Polyline

Postpick

Project menu

about

close

new

new window

open

print

print setup

save

save as

quit

Project command

Project requester

Project window

Prepick

Print

Print setup

Print setup requester

Q

Quit

R

Rectangle

3-point

Redraw

Registration

Requesters

Circle/Ellipse/Arc Options

Color Setting

Entity Info

Grid Settings

Layers

Polygon Options

Print Setup

Project

Units Settings

Zoom Settings

Rotate

S

Save

Save as

Save settings

Save settings as

Save view

Scale

Screen elements

Screen mode command

Segment

Select all

Select font command

Self

Self/Copy modifiers

Set

all

color

hatch

layer

linestyle

lineweight

Settings menu

colors

create icons?

grid

load settings

save settings

save settings as

screen mode

show grid

units

workbench (open/close)

zoom

Setting the element attributes

Show grid

Snap modes

Directional snap

None

Orthogonal

Orthogonal 45

Grid snap

Grid Snap Switch

Object snap

Midpoint

None

Point

Speed issues

Symbols

Symbols menu

create symbol

explode symbol

place symbol

System requirements

T

Text

Text information bar

Text information bar

Tools palette

Tools palette

Topological levels

Transforming objects

Types of drawing tools

U

Units command

Units settings requester

Unpicking

Using MagnifiCAD help

Using MagnifiCAD with other programs

V

View menu

coordinates and snap bar

color Palette

hatch Palette

pan

redraw

save view

text information bar

tools Palette

views...

zoom all

zoom in

zoom in by factor

zoom out by factor

Views

W

What's New?

Window border

Workbench (open/close)

X

Y

Z

Zoom all

Zoom command

Zoom in

Zoom in By Factor

Zoom out by factor

Zoom settings requester

1.147 howdoi

How Do I...?

Q: How do I speed things up?

A: Close the Color and Hatch Palettes, if they are open. Select the HIRES (no interlace) screenmode instead of a higher-resolution screenmode, and few colors (no less than 16).

Q: I can't seem to use the Set Hatch tool on the entities?

A: Hatching can only be applied inside an entity, i.e. the entity you select while 'Set Hatch' is active will be filled with the appropriate hatch.

Q: How do I Print a drawing as Landscape?

A: Landscape printing in MagnifiCAD is not supported yet, but you can rotate your drawing by 90 degrees before you print it. Look at the Print Preview to see how it looks.

Q: How come I get a 'out of memory' message when trying to print?

A: MagnifiCAD uses much memory when printing, because the drawing is drawn at the resolution of the printer. Try to set your printer's resolution to the lowest possible, and make sure you have enough CHIP memory free.

Q: Why is there no hatching when printing?

A: When there is not enough memory, MagnifiCAD cuts the hatching from the printing process. Try to set your printer at a lower resolution, or have more memory free.

1.148 whatsnew

What's New in 1.1?

The following features are new in this version of magnifiCAD:

- * Polycurve Drawing Tool: This is a new drawing tool for drawing curved polylines. Currently, only one type of polycurve is supported.
 - * Topological Levels: The topological levels is used to determine what level you are working on: at element level (creating/editing whole elements), at segment level (editing separate lines), or at point level (editing separate points).
 - * Scale Tool: The Scale tool can be used to scale elements to different sizes.
 - * Color and Depth Settings: These can be used to set the number of colors, and specifying these colors.
 - * Better printing: The printing routines should run a bit smoother now, and a few new options are added. There is still some problems with memory fragmentation when printing.
-

- * Faster input handling: The input routines have had an overhaul, and input and rubberbanding should now go a bit faster than before.
- * Keyboard support in requesters: All requesters should now have keyboard shortcuts for all gadgets.
- * Other Things: There are many small improvements and changes since the last release.

1.149 usingmagnificadhelp

Using MagnifiCAD Help

There are several ways to use the help functions:

- o You can press the 'HELP' key to display the main Help Page.
- o You can select an item from the 'Help' menu.
- o You can press help while selecting a menu item to get help on that specific item.