

# Toolbox LT

## 2009



### Getting Started Guide Part 1

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**GlobalCAD**

# Introduction

Welcome to Toolbox LT 2009, the most cost effective solution for extending your design and drafting capabilities with AutoCAD LT. Now you can design in 3D with solids and surface modelling, generate realistic shaded renders, import and manipulate graphic images and load and run Lisp utilities and ARX applications.

This user guide provides a complete list of shortcut keys for quick access to Toolbox LT commands.

Please refer to the Getting Started Guide Part 2 for step-by-step instructions on using the 'Design Libraries' and 'Schedule' tools found within Toolbox LT, available from [www.globalcad.com/support/documentation.htm](http://www.globalcad.com/support/documentation.htm)

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Toolbox LT 2009 is compatible with AutoCAD LT 2000, 2000i, 2002, 2004, 2005, 2006, 2007, 2008 and 2009. The software can also be used in conjunction with other AutoCAD LT third-party applications. Multi-user licensing options are available and provide support for all major network platforms including Novell Netware and Windows NT Server.

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## The Shortcut Keys



Use the shortcut keys (also known as accelerator keys) below at the AutoCAD LT Command line for quick access to Toolbox LT tools. Shortcut keys are keys and key combinations that start commands. For example, you can type BM to run Block Manager, which is the same result as choosing Block Manager from the Toolbox LT drop-down menu.








► Design Libraries				
Ref	Icon	Command	Shortcut	Description
●		Block Manager	<b>BM</b>	Block Manager enables you to create and manage 2D/3D symbol libraries.
●		Hatch Manager	<b>HM</b>	Hatch Manager enables you to create and manage hatch patterns.
●		Linetype Wizard	<b>LZ</b>	Linetype Wizard enables you to create and manage complex linetypes.








► Load Applications				
Ref	Icon	Command	Shortcut	Description
●		Load Application	<b>APPLOAD</b>	Loads and unloads Lisp, ARX and DBX utilities and applications.
●		Startup Suite	---	Adds and removes application files from the Startup Suite.
●		Lisp Prompt	<b>LISP</b>	Provides a Lisp prompt at the command line for evaluation of expressions.









► Schedule				
Ref	Icon	Command	Shortcut	Description
●		Edit Attribute	<b>ATTEDIT</b>	Changes attribute information.
●		Block Attribute Manager	<b>BATTMAN</b>	Edits attribute properties of a block definition.
●		Synchronize Attributes	<b>ATTSYNC</b>	Updates all instances of a specified block with the current attributes.
●		Attribute Wizard	<b>AZ</b>	Automatically attaches a group of block attributes.
●		GlobalCAD Schedule	<b>GS</b>	Creates schedules and cost estimates from block attributes.
●		Dynamic Link	<b>GD</b>	Bi-directionally links AutoCAD drawings with Microsoft Excel












► 3D Orbit				
Ref	Icon	Command	Shortcut	Description
●		3D Pan	<b>3DPAN</b>	Starts the interactive 3D view and enables you to drag horizontally/vertically.
●		3D Zoom	<b>3DZOOM</b>	Starts the interactive 3D view so you can zoom in and out on the view.
●		3D Orbit	<b>3DORBIT</b>	Controls the interactive viewing of objects in 3D.
●		3D Continuous Orbit	<b>3DCORBIT</b>	Starts the interactive 3D view for continuous motion.
●		3D Swivel	<b>3DSWIVEL</b>	Starts the interactive 3D view for simulation of camera turning.
●		3D Adjust Distance	<b>3DDISTANCE</b>	Starts the interactive 3D view, objects appear closer or farther away.
●		3D Adjust Clip Planes	<b>3DCLIP</b>	Starts the interactive 3D view and opens the Adjust Clipping Planes window.
●		Front Clip On/Off	<b>(DVIEW)</b>	Clips the view, obscuring objects located in front of the front clipping plane.
●		Back Clip On/Off	<b>(DVIEW)</b>	Clips the view, obscuring objects located behind the back clipping plane.

















► Clip				
Ref	Icon	Command	Shortcut	Description
●		Clip Xref	<b>XCLIP</b>	Defines an xref or block clipping boundary and sets the front/back clip planes.
●		Clip Existing Viewport	<b>VPCLIP</b>	Clips viewport objects and reshapes the viewport border.



















► Image				
Ref	Icon	Command	Shortcut	Description
●		Image Manager	IMAGE	Manages images, including photos and graphics.
●		Raster Image	IMAGEATTACH	Attaches a new image to the current drawing.
●		Clip Image	IMAGECLIP	Uses clipping boundaries to define a image sub-region.
●		Adjust	IMAGEADJUST	Controls the image display (brightness/contrast/fade).
●		Quality	IMAGEQUALITY	Controls the display quality of images.
●		Transparency	TRANSPARENCY	Controls the image's background transparency.
●		Frame	IMAGEFRAME	Controls display/plotting of image frames.

► Shade				
Ref	Icon	Command	Shortcut	Description
●		2D Wireframe	(SHADEMODE)	View and edit objects in 2D wireframe representation.
●		3D Wireframe	(SHADEMODE)	View and edit objects in 3D wireframe representation.
●		Hidden	(SHADEMODE)	View and edit objects in hidden mode.
●		Flat Shaded	(SHADEMODE)	View and edit objects in flat shaded mode.
●		Gouraud Shaded	(SHADEMODE)	View and edit objects in gouraud shaded mode.
●		Flat Shaded, Edges On	(SHADEMODE)	View and edit objects in flat shaded, edges on.
●		Gouraud Shaded Edges On	(SHADEMODE)	View and edit objects in gouraud, edges on mode.

► Layers/Express Tools				
Ref	Icon	Command	Shortcut	Description
●		Match Object's Layer	LAYMCH	Changes the layer(s) of selected object(s) to match destination object.
●		Change to Current Layer	LAYCUR	Changes the layer of one or more objects to the current layer.
●		Isolate Object's Layer	LAYISO	Isolates the layer(s) of one or more selected objects by turning all other layers off.
●		Copy Objects to Layer	COPYTOLAYER	Copy selected objects to a specified layer leaving the original objects intact.
●		Freeze Object's Layer	LAYFRZ	Freezes the layer of selected object(s).
●	---	Thaw all layers	LAYTHW	Thaws all layers in the drawing.
●		Turn Object's Layer Off	LAYOFF	Turn off the layer of selected object(s).
●	---	Turn on all layers	LAYON	Turns on all layers in the drawing.
●		Lock Object's Layer	LAYLCK	Locks layer of the selected object.
●		Unlock Object's Layer	LAYULK	Unlock the layer of a selected object.
●	---	List nested object properties	XLIST	Lists layer name, color, and linetype of a nested object in a block or Xref.

► Solids				
Ref	Icon	Command	Shortcut	Description
●		Box	BOX	Creates a three-dimensional solid box.
●		Sphere	SPHERE	Creates a three-dimensional solid sphere.
●		Cylinder	CYLINDER	Creates a three-dimensional solid cylinder.
●		Cone	CONE	Creates a three-dimensional solid cone.
●		Wedge	WEDGE	Creates a three-dimensional solid wedge.
●		Torus	TORUS	Creates a three-dimensional solid torus.
○		Extrude	EXTRUDE	Creates unique solid primitives by extruding existing 2D objects.
○		Revolve	REVOLVE	Creates solids by revolving two-dimensional objects about an axis.
○		Slice	SLICE	Slices a set of solids with a plane.
○		Section	SECTION	Uses the intersection of a plane and solids to create a region.
○		Interference	INTERFERE	Creates a composite 3D solid from common volume of two or more solids.

► Surfaces				
Ref	Icon	Command	Shortcut	Description
●		2D Solid	<b>SOLID</b>	Creates solid-filled triangles and quadrilaterals.
●		3D Face	<b>3DFACE</b>	Creates a three-dimensional face.
●		Box	<b>AI_BOX</b>	Creates a 3D box polygon mesh.
●		Wedge	<b>AI_WEDGE</b>	Creates a right-angle, wedge-shaped polygon mesh.
●		Pyramid	<b>AI_PYRAMID</b>	Creates a pyramid or a tetrahedron.
●		Cone	<b>AI_CONE</b>	Creates a cone-shaped polygon mesh.
●		Sphere	<b>AI_SPHERE</b>	Creates a spherical polygon mesh.
●		Dome	<b>AI_DOME</b>	Creates the upper half of a spherical polygon mesh.
●		Dish	<b>AI_DISH</b>	Creates the lower half of a spherical polygon mesh.
●		Torus	<b>AI_TORUS</b>	Creates a toroidal polygon mesh that is parallel to the current UCS XY plane.
●		Edge	<b>EDGE</b>	Changes the visibility of three-dimensional face edges.
●		3D Mesh	<b>3DMESH</b>	Creates a free-form polygon mesh.
●		Revolved Surface	<b>REVSURF</b>	Creates a revolved surface about a selected axis.
●		Tabulated Surface	<b>TABSURF</b>	Creates a tabulated surface from a path curve and a direction vector.
●		Ruled Surface	<b>RULESURF</b>	Creates a ruled surface between two curves.
●		Edge Surface	<b>EDGESURF</b>	Creates a three-dimensional polygon mesh.

► Solids Editing				
Ref	Icon	Command	Shortcut	Description
○		Union	<b>UNION</b>	Combines selected regions or solids by addition.
○		Subtract	<b>SUBTRACT</b>	Combines selected regions or solids by subtraction.
○		Intersect	<b>INTERSECT</b>	Creates composite solids or regions from the intersection of solids.
○		Extrude Faces	<b>(SOLIDEDIT)</b>	Extrudes selected planar faces of a 3D solid object.
○		Move Faces	<b>(SOLIDEDIT)</b>	Moves the selected face on a 3D solid object.
○		Offset Faces	<b>(SOLIDEDIT)</b>	Offsets faces equally by a specified distance or through a specified point.
○		Delete Faces	<b>(SOLIDEDIT)</b>	Deletes or removes faces, including fillets and chamfers.
○		Rotate Faces	<b>(SOLIDEDIT)</b>	Rotates one or more faces or a collection of features on a solid.
○		Taper Faces	<b>(SOLIDEDIT)</b>	Tapers faces with an angle.
○		Copy Faces	<b>(SOLIDEDIT)</b>	Copies faces as a region or a body.
○		Color Faces	<b>(SOLIDEDIT)</b>	Changes the color of faces.
○		Copy Edges	<b>(SOLIDEDIT)</b>	Copies 3D edges.
○		Color Edges	<b>(SOLIDEDIT)</b>	Changes the color of edges.
○		Imprint	<b>(SOLIDEDIT)</b>	Imprints an object on the selected solid.
○		Clean	<b>(SOLIDEDIT)</b>	Removes shared edges or vertices having the same surface.
○		Separate	<b>(SOLIDEDIT)</b>	Separates 3D solid objects with disjointed volumes.
○		Shell	<b>(SOLIDEDIT)</b>	Shelling creates a hollow, thin wall with a specified thickness.
○		Check	<b>(SOLIDEDIT)</b>	Validates the 3D solid object as a valid ShapeManager solid.

### Key to Symbols

- Feature available under AutoCAD LT 2000, 2000i, 2002, 2004, 2005, 2006, 2007, 2008 and 2009.
- Feature available under AutoCAD LT 2000, 2000i and 2002 only.

► Additional Commands			
Group	Command	Shortcut	Description
Surfaces	Polyface Mesh	<b>PFACE</b>	Creates a 3D polyface mesh vertex by vertex.
Modify 3D	3D Array	<b>3DARRAY</b>	Creates a three-dimensional array.
Modify 3D	Rotate 3D	<b>ROTATE3D</b>	Moves objects about a three-dimensional axis.
Modify 3D	Mirror 3D	<b>MIRROR3D</b>	Creates a mirror image of objects about a plane.
Modify 3D	Align	<b>ALIGN</b>	Aligns objects with other objects in 2D and 3D.
View	Camera	<b>CAMERA</b>	Sets a different camera and target location.
Draw	Sketch	<b>SKETCH</b>	Creates a series of freehand line segments.
Draw	Trace	<b>TRACE</b>	Creates solid lines.
Draw	Multiline	<b>MLINE</b>	Creates multiple parallel lines.
Draw	Multiline Edit	<b>MLEDIT</b>	Edits multiple parallel lines.
Draw	Multiline Style	<b>MLSTYLE</b>	Defines a style for multiple parallel lines.
---	Hatch to Solid	<b>HATCH2SOLID</b>	Converts a hatch pattern to a solid color.
---	Solid to Hatch	<b>SOLID2HATCH</b>	Converts a solid color to a hatch pattern.
Attributes	Attribute Redefine	<b>ATTREDEF</b>	Redefines a block and updates associated attributes.
Attributes	Enhanced Attribute Edit	<b>EATTEDIT</b>	Edits attributes in a block reference.
Dimension	Quick Dimension	<b>QDIM</b>	Quickly creates a dimension.
---	Open Xref	<b>XOPEN</b>	Opens an external reference (xref) in a new window.
File	Postscript In	<b>PSIN</b>	Imports an encapsulated postscript file (EPS).
File	Postscript Out	<b>PSOUT</b>	Generates an encapsulated postscript file (EPS).
---	Postscript Fill	<b>PSFILL</b>	Fills a closed polyline with the contents of an EPS file.
Insert	Drawing Exchange Binary	<b>DXBIN</b>	Imports specially coded binary files.
---	Compile	<b>COMPILE</b>	Compiles shape files and PostScript font files.
---	Load Shape	<b>LOAD</b>	Makes shapes available for use by the SHAPE command.
---	Shell	<b>SHELL</b>	Accesses operating system commands.

**TRUECOLOR** support for AutoCAD LT 2004 and above.

Toolbox LT provides the full color selection dialog including TrueColor support for the CMYK color model and support for custom color books.

**GRADIENT HATCH** support for AutoCAD LT 2004 and above.

Toolbox LT provides the Gradient tab under the AutoCAD LT hatch dialog, enabling the creation and editing of stunning gradient hatch patterns.

Toolbox LT also enables over 75 missing **SYSTEM VARIABLES** in AutoCAD LT.