

GlobalCAD Exchange 2013

Version 1.2



Getting Started Guide



GlobalCAD

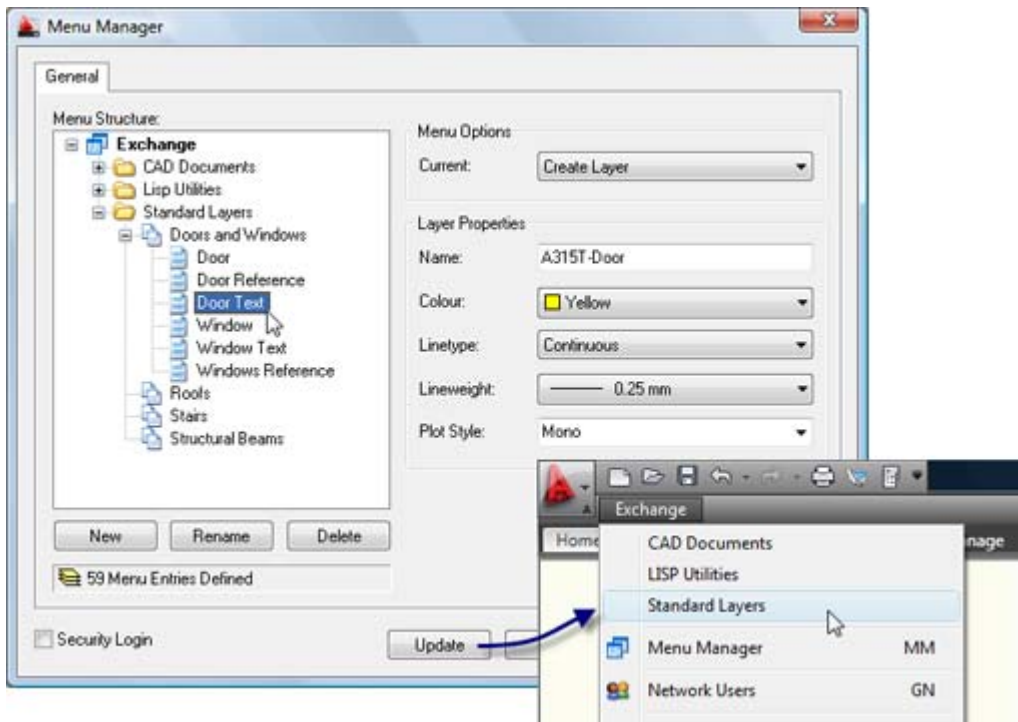
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Introduction

GlobalCAD Exchange 2013 enables you to manage and deploy custom menus across your AutoCAD user network. Incorporate company layering standards, links to CAD documents or even load third-party applications including LISP and ARX files - all at the click of a button.



This user guide provides step-by-step instructions on getting started with GlobalCAD Exchange. Additional product documents and/or tutorials are available from the relevant www.globalcad.com product page.

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GlobalCAD Exchange 2013 is compatible with the entire family of AutoCAD products including AutoCAD 2007-2013, AutoCAD Architecture, AutoCAD Civil 3D, AutoCAD Electrical, AutoCAD Land Desktop, AutoCAD Map 3D, AutoCAD Mechanical, AutoCAD MEP and AutoCAD P&ID.

The software can also be used in conjunction with other AutoCAD third-party applications. Multi-user licensing options are available and provide support for all major network platforms including Windows Server.

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Acknowledgements

GlobalCAD Exchange 2013 (version 1.2).

Our thanks go out to everyone involved in the development and production of GlobalCAD Exchange 2013.

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To Display or Close Toolbars

Select the **Toolbars** entry from the **Exchange** drop-down menu.

- Right-click the background or title bar of any displayed toolbar, such as the GlobalCAD Exchange toolbar.
- From the shortcut menu, select the toolbar you want to display or close.

Typing TOOLBAR at the AutoCAD command line displays the Toolbars dialog box, where you can select the Exchange entry from the Menu Group drop-down list. From here the GlobalCAD Exchange toolbar can be turned on or off or customized.







You can display multiple toolbars at once, and you can dock or float toolbars. Docked toolbars lock into place along the top, bottom, or sides of the AutoCAD window. Floating toolbars move freely – move them using your pointing device. Floating toolbars can overlap other floating and docked toolbars. You can also hide toolbars until you need them.

Note – refer to the relevant **AutoCAD Help** topics for further details on toolbars.

The Shortcut Keys

Use the shortcut keys (sometimes called accelerator keys) below at the AutoCAD *command line* for quick access to GlobalCAD Exchange tools.

Shortcut keys are keys and key combinations that start commands. For example, you can type **MM** to run Menu Manager, which is the same result as choosing **Menu Manager** from the **Exchange** drop-down menu.

Icon	Command	Shortcut	Description
	Menu Manager	MM	Menu Manager lets you create, manage and distribute custom menus within your AutoCAD-based software. Incorporate company layering standards, links to CAD documents or even load third-party applications including LISP and ARX files.
	Network Users	GN	The Network Users feature enables users of AutoCAD-based software to see exactly who is working on what drawing in real-time. More than this, users can send and receive instant communications relating to drawings.
	Block Manager	BM	Block Manager enables you to create and manage 2D and 3D symbol libraries. Automated options means libraries containing hundreds of blocks can be created in seconds without the need for user intervention.
	Attribute Wizard	AZ	With Attribute Wizard, you can attach a group of attributes to drawing entities or blocks at the click of a button.
	Hatch Manager	HM	Hatch Manager enables you to create and manage hatch patterns. You can build entire libraries from scratch, add existing PAT files in seconds or create your own unique patterns from existing drawing objects.
	Linetype Wizard	LZ	Linetype Wizard provides the solution to all your linetype creation and management needs. You can build entire libraries from scratch using standard drawing entities to create both simple and complex linetypes.

Ordering Information

GlobalCAD Exchange 2013 is compatible with the entire family of AutoCAD products including AutoCAD 2007-2013, AutoCAD Architecture, AutoCAD Civil 3D, AutoCAD Electrical, AutoCAD Land Desktop, AutoCAD Map 3D, AutoCAD Mechanical, AutoCAD MEP and AutoCAD P&ID.

The software can also be used in conjunction with other AutoCAD third-party applications. Multi-user licensing options are available and provide support for all major network platforms including Windows Server.

Free unlimited screen-based technical support is provided, with telephone options also available to registered customers. In addition, all GlobalCAD products carry a 30-day guarantee against defects in material and workmanship.

Purchase orders are accepted only from government and accredited educational institutions and major corporations, provided that they are submitted on purchase order forms with a purchase order number (net 30 days). Please be sure to include the standard order form with your order.

All product orders are dispatched with a printed invoice. For further details, please view the GlobalCAD Exchange 2013 order form.

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Menu Manager

GlobalCAD Exchange allows for the creation and management of custom menus within your AutoCAD-based software. These menus can be shared with the entire design team across a network. Incorporate company layering standards, links to CAD documents or even load third-party applications including LISP and ARX files – all at the click of a button!

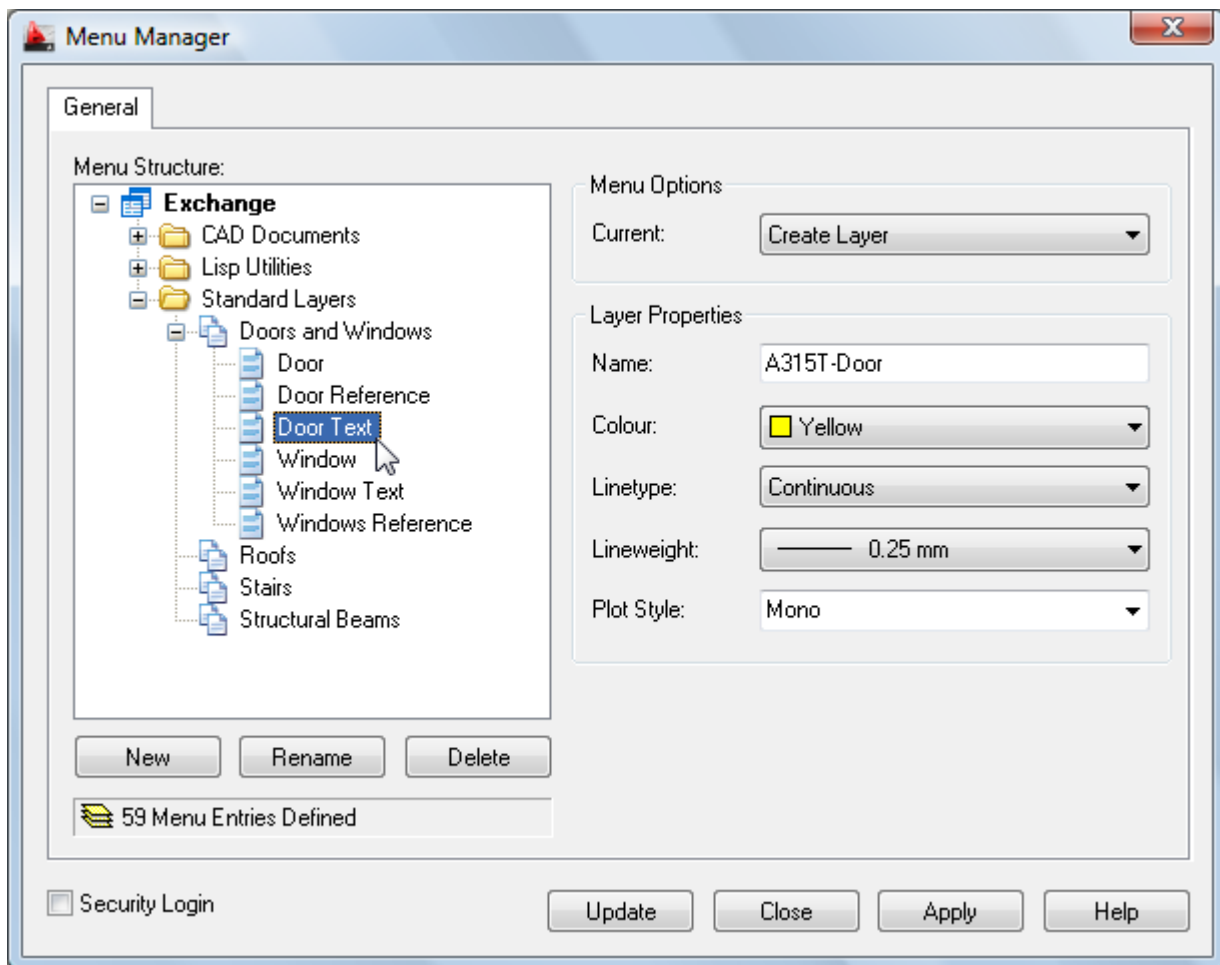
Password protection is available for this feature to prevent unauthorized modification or use. The first time the application is run, you will be asked if you want to employ passwords. Simply enter a username and password to secure the program in the **Create Login** dialog. You can toggle password protection at any time via the **Security Login** check box option.

With the Menu Manager feature you can:

- Easily create custom menus inside AutoCAD.
- Deploy company layering standards to all network users.
- Publish links to company documentation or web pages.
- Load third-party utilities e.g. LISP, ARX.
- Administer live menu updates from a central location.

Initial Steps

Select the **Menu Manager** entry from the GlobalCAD Exchange drop-down menu. Double-click on one of the custom menu names in the left **Menu Structure** navigation pane of the dialog ('Navigation View') to display all of the existing categories for that menu. Below each category is displayed the defined menu entries. Click on a menu entry to display its properties, shown right.



Individual menu entries can consist of one of the following functions:

- **Create Layer.** Generate new layers based on pre-defined Name, Colour, Linetype, Lineweight and Plotstyle values.
- **Load Application/Run Script.** Execute third-party utilities including LISP and ARX files.
- **Open Document.** Link to company documents or web pages e.g. CAD standards or plotter configuration notes.

Creating Menu Entries

You create a new menu entry in the Navigation View. You can give the entry any name you want, and you can assign it any of the functions described under Initial Steps above.

Create a new menu entry by doing the following:

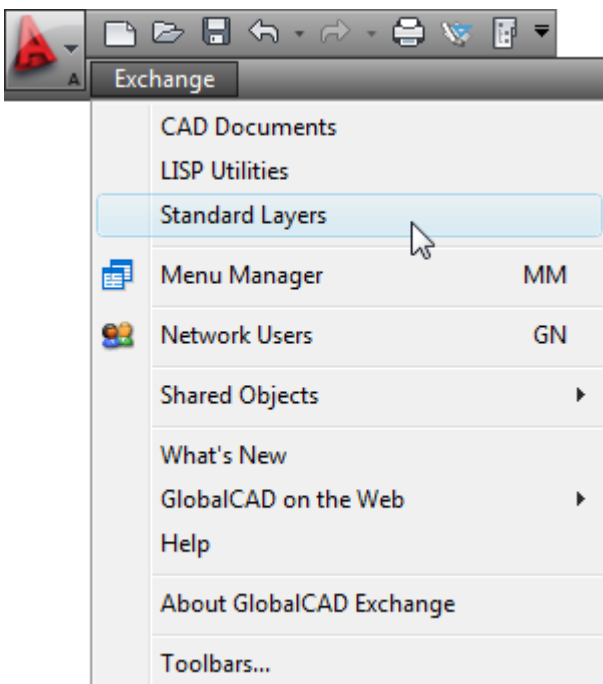
- Double-click an existing menu name in the menu tree e.g. Layer Menu, then select the appropriate menu category.
- Click the **New** button and enter a name for the new menu entry.

Select the relevant function to associate with this menu entry, from the drop-down list.

Enter the necessary values in the group box below and click the Update button.

Notes

- The custom AutoCAD menu is updated instantly on the current computer. The menu will be updated on each networked computer when users next start an AutoCAD session.



Network Users

GlobalCAD Exchange meets the messaging and collaboration needs of today's design business. The Network Users feature enables users of AutoCAD-based software to see exactly who is working on what drawing in real-time. More than this, users can send and receive instant communications relating to drawings including requests for ownership of DWG, DXF and DWT files when needed.

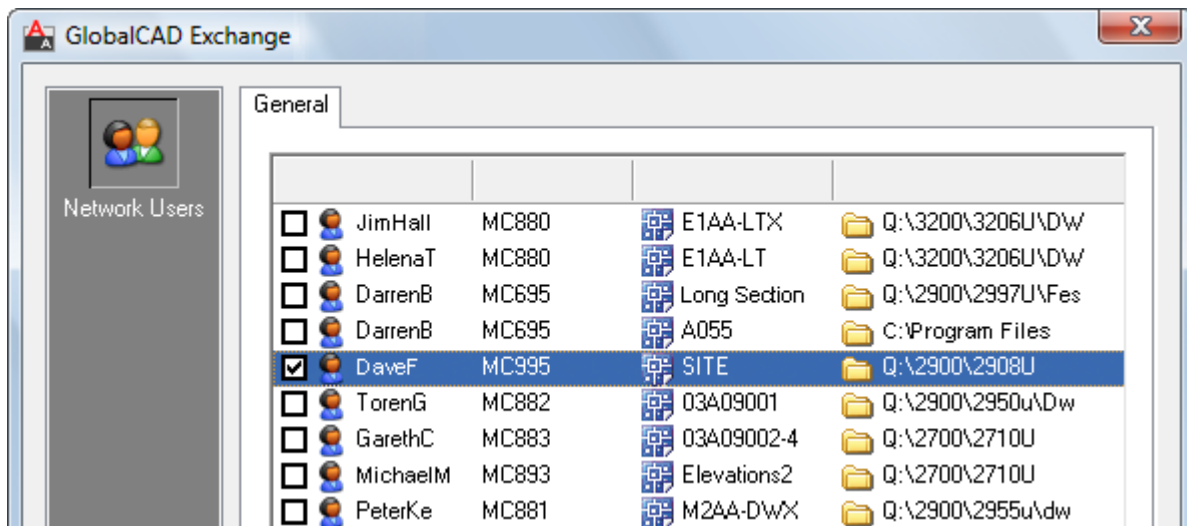
With these collaborative tools, GlobalCAD Exchange enables fast access to the design team members and drawing data you want, anytime and anywhere within your organization.

With the Network Users feature you can:

- Determine who has particular drawings open.
- View all live DWG, DXF and DWT files.
- Send instant messages to design team members.
- Broadcast messages to user groups.
- Review design team activities in real-time.

Review Design Activities

Select the **Network Users** option from the left 'places' bar to display a report view of all live drawings and their associated owners. Information available includes design team usernames, computer name, drawing format and folder location.



You can sort the report view columns into ascending or descending order by clicking the relevant column heading.

Filter out unwanted drawings from the list using the following dialog options:

- **Ignore drawings under (filesize KB).** Specify a minimum file size so that smaller or empty drawings are hidden from view. This helps ensure only key design files are displayed.
- **Ignore empty drawings.** Filters out all system default drawings with the file name pattern Drawing1, Drawing2 etc.

Send Instant Communications

Select the **Network Users** option from the left 'places' bar to display a report view of all live drawings and their associated owners.

Subject

Design Review Meeting

Message:

Dave,

Please can you close the SITE.DWG model so I can make the changes we discussed on Friday. Thanks!

Today's design review meeting is at 10:30am.

Michael

Send Cancel

To send a message to one or more design team members:

- Check the box next to the username(s) you want to send to in the report view.
- Click the **Broadcast Message** button and type the subject and message.
- Type the subject and message in the dialog box and click **Send**.

Notes

- Messages you send are instantly received by the recipient in a 'New Message Arrived' dialog. Information available to the recipient includes the sender's username, computer name and the message date and time.
- The 'New Message Arrived' dialog includes a 'Reply' button so those recipients can respond to design queries and requests.

Block Manager

Block Manager allows drawing blocks and details to be effectively stored within a powerful database, providing for a more controlled and managed working environment. This form of control is essential for the efficient and productive use of AutoCAD.

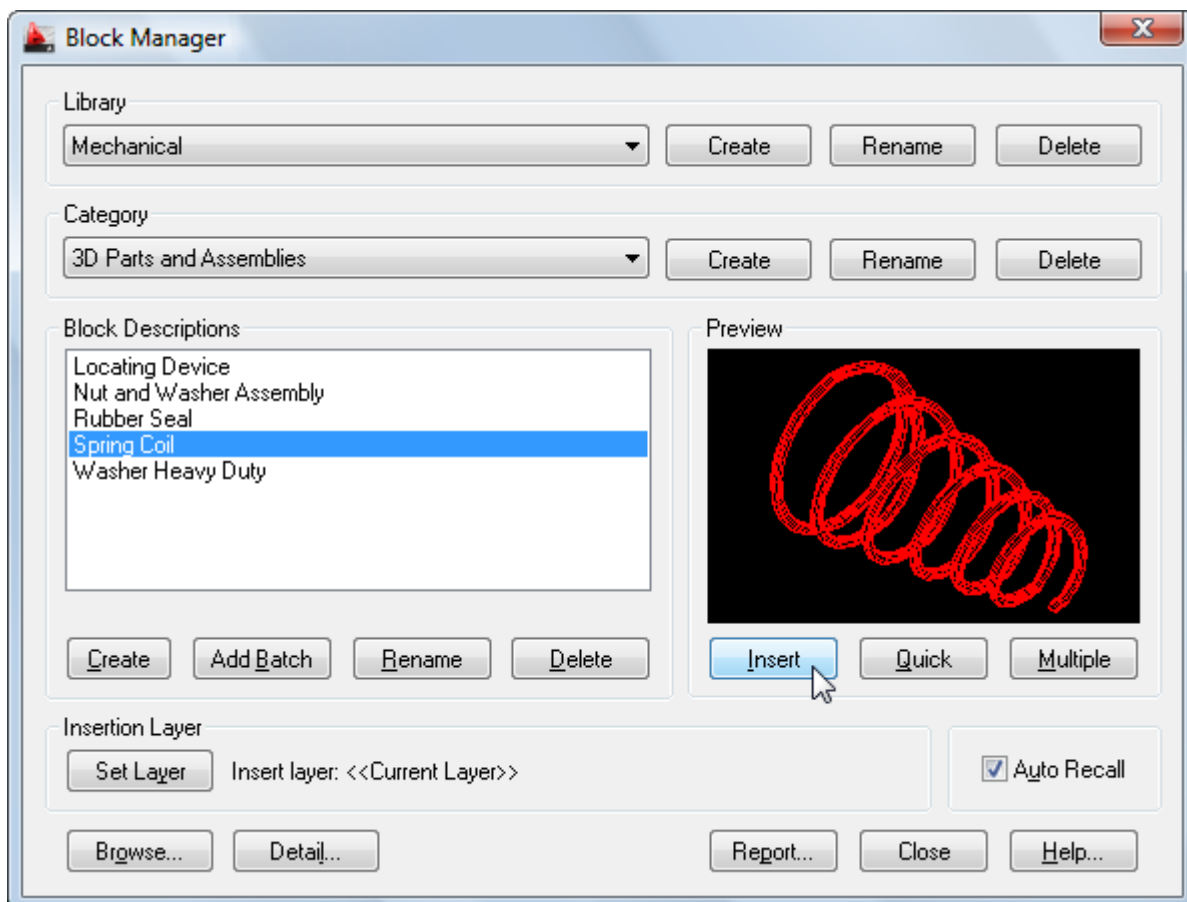
Now your entire collection of blocks can be sensibly organized within distinct libraries with advanced viewing capabilities. This means that blocks can be identified fast and are accessible right when you need them. Management tools ensure the database is always up to date, with the ability to view and print block details and other library information. Blocks can be contained on local drives or on a network.

With Block Manager you can:

- Create categories containing 2D, 3D and attributed blocks.
- Add multiple blocks in seconds using the unique batch-processing tools.
- Build 3D libraries with photo-realistic rendered thumbnails.
- View and compare blocks fast within libraries.
- Avoid unnecessary duplication of blocks with full network compatibility.
- Secure your work with full library password protection.
- Effectively manage and keep track of all your blocks.

Initial Steps

Block Manager's main dialog displays the contents of the blocks database. The current library and category is shown at the top with the relevant block descriptions listed below. Displayed right is the preview image for the block currently highlighted and below is shown the current layer for insertion. Libraries are stored within the GlobalCAD...\Libs folder.



Creating a working library and category is the first step in adding your blocks to the database. The library can be assigned a full and meaningful description, such as the working discipline e.g. 'architectural symbols' or maybe a project name.

Note when using the Add Batch feature to add multiple blocks: To successfully add multiple blocks under Block Manager, each block must be capable of being independently opened within the current AutoCAD session. This means that the associated menu, font files and any other dependent files are present and the block(s) open without error.

Creating a Library

Select the **Create** button under the **Library** heading from the main display.

- Enter the proposed library description within the text box.
- Next, enter your signature details. Note the default shown is the user's login name.
- Choose **OK** to accept the descriptions and proceed.

To rename an existing library, pick the chosen description from the **Library** list box and click on the **Rename** button shown right. Next, enter the proposed new library heading within the text box and choose **OK** to accept this description.

Similarly, to delete an existing library, pick the chosen description from the **Library** list box and click on the **Delete** button shown right. Next, to confirm your wish to remove this library, click on the **OK** button shown or **Cancel** to exit.

Note that when a library is deleted, its corresponding contents (including blocks) are also deleted.

Creating a Category

Select the **Add** button under the **Category** heading from the main display.

- Enter the proposed category description within the text box.
- Choose **OK** to accept the description and proceed.

To rename an existing category, pick the chosen description from the **Category** list box and click on the **Rename** button shown right. Next, enter the proposed new category heading within the text box. Choose **OK** to accept this description.

Similarly, to delete an existing category, pick the chosen description from the **Category** list box and click on the **Delete** button shown right. Next, to confirm your wish to remove this category, click on the **OK** button shown or **Cancel** to exit.

Note that when a category is deleted, its corresponding contents (including blocks) are also deleted.

Creating a Block

Blocks can be added individually to the database, created from existing drawing objects in the normal way.

- Open the drawing or block that contains the details to be added.
- Select the **Create** button under the Block Descriptions heading from the main display.
- Select the objects that will make up the new block.
- Specify the insertion point for the block and Block Manager will automatically zoom in around the selected objects to create the preview image.
- Enter the proposed description for the block within the text box and click on the **OK** button.

Adding Multiple Blocks

Blocks can also be added in multiple selections with the unique and powerful Add Batch feature. Use this method to create a complete category listing from a set of blocks stored anywhere on disk (local and network drives).

- Select the **Add Batch** button under Block Descriptions from the main display.
- From the Add Batch dialog the following options are available, according to preference:
 - Include sub-folders
 - Create categories from sub-folder names
 - Ignore duplicate-named blocks
 - Ignore illegally-named blocks

The Advanced section of the dialog also provides a range of options for creating 3D wireframe or photo-realistic libraries. These are available by picking the **Create 3D Library** tick box:

- Wireframe (hidden lines removed)
- Define Viewpoint
- Utilize existing Bitmap files

Selecting the Wireframe (*hidden lines removed*) option will create wireframe preview images of all blocks (containing 3D objects) encountered during the Add Batch operation. The viewpoint location used to display each block will be the value specified within the *Define Viewpoint* text box.

Choose the *Utilize existing Bitmap files* option if you prefer the Add Batch operation to use existing, manually created, Bitmap images. This enables you to define each 3D object's unique viewpoint and therefore obtain the very best rendered image. The BMP extension files must be located within the same folder, and share the same filename, as the associated DWG blocks. Use the standard AutoCAD Render command to create the Bitmaps, with the following settings:

Set the Render Type to Photo Real and the File Type to BMP.

The User Defined Size (image size) is X=216 and Y=137 with the default Aspect Ratio of 1.0.

The recommended Color setting is 8 Bits (256 colors).

- Next, click on the **Browse** button to select the folder containing the relevant blocks. Note, if the *Include sub-folders* option has been specified, blocks contained within any sub-folders will also be added. In addition, selecting the *Create categories from sub-folder names* option means that new categories will be created, containing the contents of each sub-folder.

You can also create photo-realistic rendered preview images (thumbnails) of your 3D blocks by selecting the *Render preview* option and defining the viewpoint setting to be applied.

- Returning to the main Add Batch dialog, click on **OK** to proceed.

Please wait while the blocks are now processed and added to the database. Once this operation is complete, the main Block Manager dialog displays the current category and new block entries.

To rename an existing block description, pick the chosen description from the Block Descriptions box and click on the **Rename** button shown below. Next, enter the proposed new block title within the text box and choose **OK** to accept this description.

Similarly, to delete an existing block description, pick the chosen description from the Block Descriptions box and click on the **Delete** button shown below. Next, to confirm your wish to remove this description, click on the **OK** button shown or Cancel to exit.

Inserting Blocks

Blocks can be inserted by clicking on the **Insert**, **Quick** or **Multiple** buttons.

The **Insert** button functions in the same way as the AutoCAD standard block insert command i.e. it prompts for the block's insertion point, axis and rotation angle. **Quick** requests only the block's insertion point and rotation angle. **Multiple** requests the same parameters as the **Quick** button, but once specified, multiple copies of the block can be inserted in succession.

Select the block for insertion from the Block Descriptions text box, click on one of the insert buttons described above and follow the prompts.

Setting the Insertion Layer

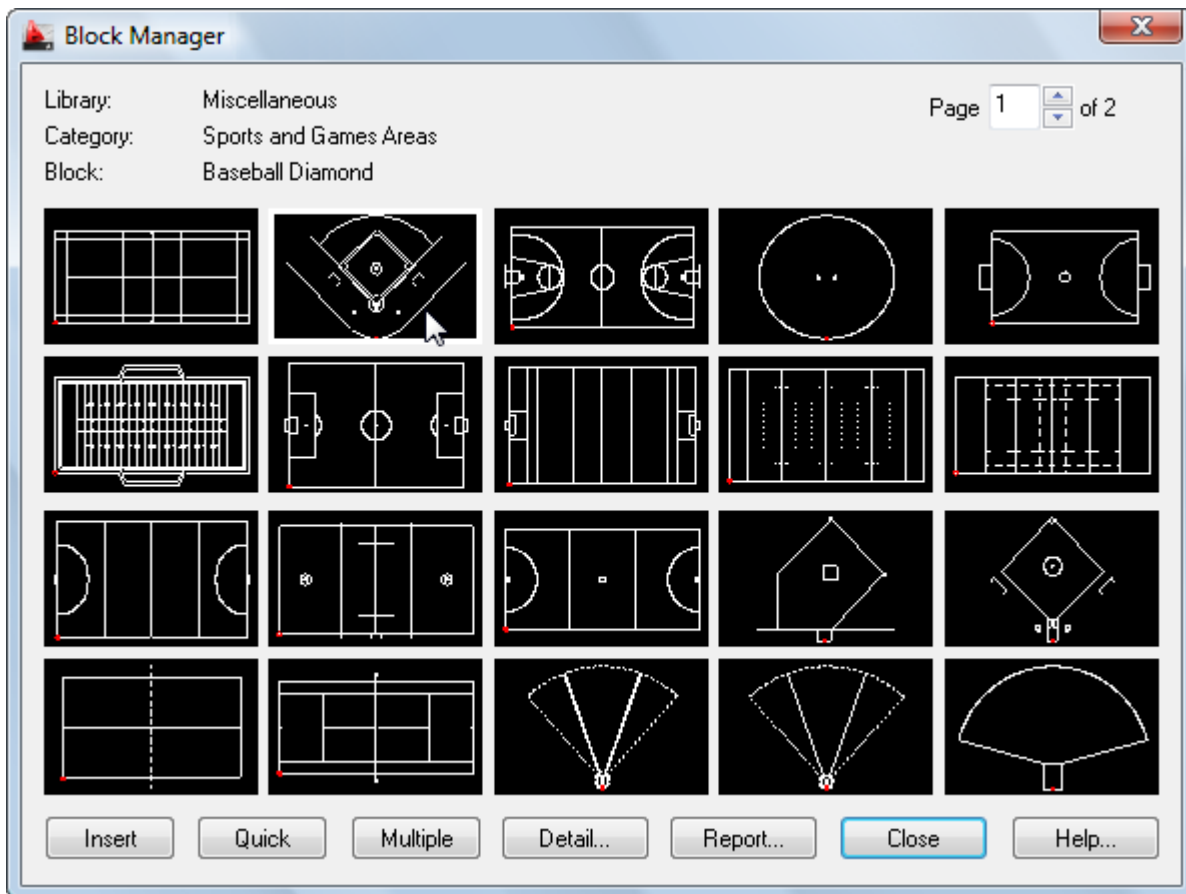
The layer upon which blocks will be inserted is shown near the bottom of the main dialog display, under the heading Insertion Layer. The default insertion layer is 0. In order to change this setting:

- Select the **Set Layer** button. The existing drawing layers available are displayed in a text box.
- Select the desired layer for block insertion and click on the **OK** button.

Note, to create a new layer, enter the new name in the Create New Layer text box below and click on the **OK** button. This will be created and made the current layer.

Browsing Libraries

Sometimes it is useful to view and compare blocks simultaneously, usually in order to make an informed choice from similar blocks within a library. Using Block Manager's Browse feature you can view blocks in this way, rapidly browsing an entire library if desired.



- Select the **Browse** button from the main display.

The page scroll box is located in the top right-hand corner of the Browse dialog.

- Click on the scroll box arrows to change the page number to view.

Current Library Details

This feature displays information concerning the current library.

Select the **Detail** button from the main display and click on **OK** when finished.

Information displayed includes the library filename and folder location, the library description, creator, current category and total number of blocks present within this category.

Library Protection

Once created, you may wish to protect specific libraries from accidental modification or deletion.

- Select the **Detail** button from the main display.
- Pick the **Library Protected** tick box at the base of the dialog display.
- Enter a unique password and confirm this in the text box below.

All library maintenance functions (i.e. Add, Delete and Rename) will now be disabled until the tick box is de-selected. Note that the original password specified must be re-entered in order to unprotect the library. It is recommended that you make a note of this and store it in a safe place.

Viewing the Block Report

Click on the **Report** button to display the full list of blocks stored under the current category.

Blocks are listed in alphanumerical order.

Choose the **Print Report** button to obtain hardcopy records.

Attribute Wizard

An attribute is a label or tag that attaches data to a block. Examples of data that might be contained in an attribute are part numbers, prices, comments, and owners' names. The tag is equivalent to a column name in a database table. Attribute information extracted from a drawing can be used in a spreadsheet or database to produce a parts list or a bill of materials.

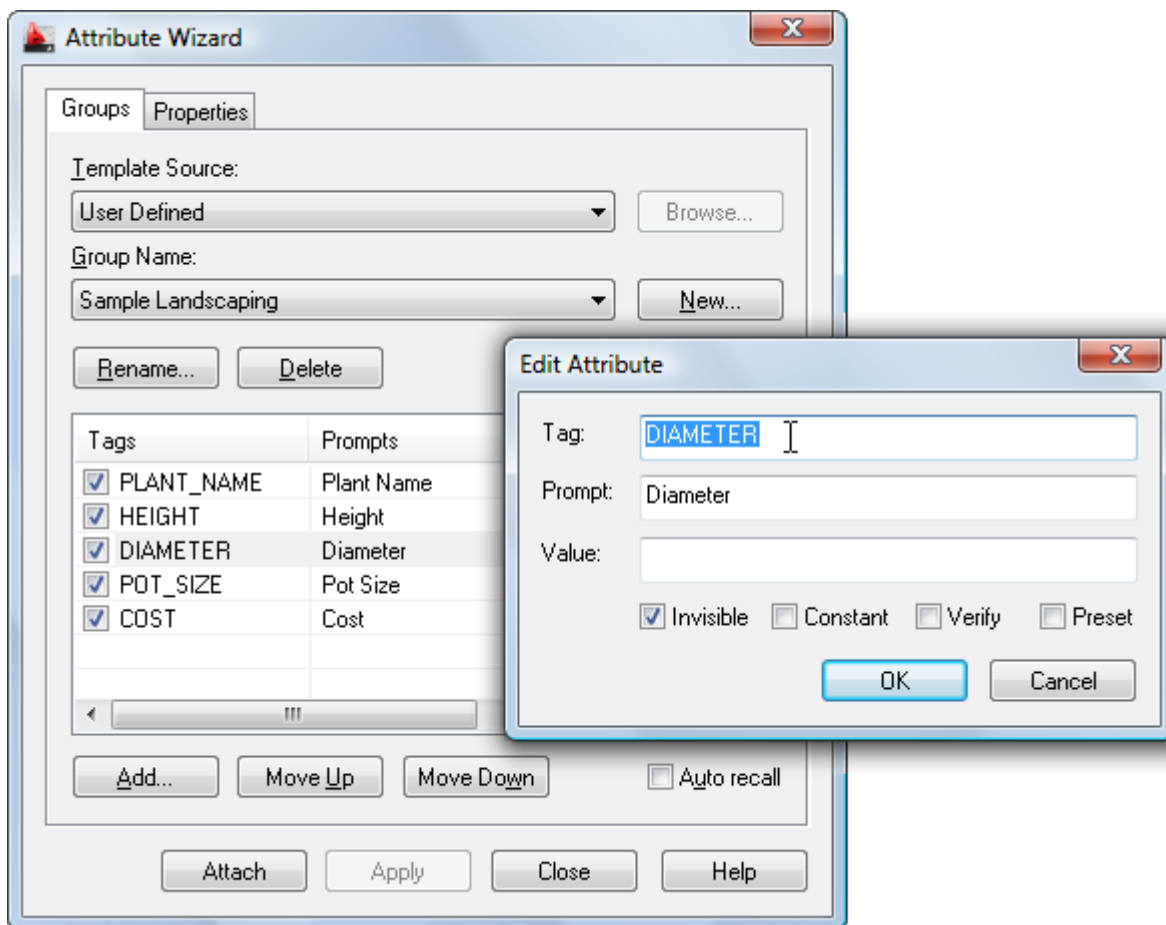
With Attribute Wizard, you can attach a group of attributes to drawing entities or blocks – all at the click of a button! Forget using the cumbersome AutoCAD ATTDEF and WBLOCK commands, now you can create and save attribute groups as templates for all your projects. Attribute Wizard provides full control over the properties of each attribute and lets you specify the order in which you wish them to appear.

With Attribute Wizard you can:

- Instantly attach a group of attributes to entities and blocks.
- View and compare attribute groups quickly and easily within libraries.
- Review and edit all tags, prompts and values in a single report.
- Control the display order of attributes within a group.
- Manage individual attribute properties.
- Share group attribute templates with full network compatibility.

Initial Steps

Attribute Wizard's main dialog displays the contents of the attribute group database. The **Groups** tab displays the current group name, followed by the associated attribute tags, prompts and values in the report view below. The **Properties** tab defines the standard AutoCAD properties and text options for the current group. Each group definition is stored within the GlobalCAD...\Attributes folder.



Creating a working attribute group is the first step in adding your attributes to the database. The group can be assigned a full and meaningful description, such as the working discipline e.g. 'architectural finishes' or maybe a project name.

Creating an Attribute Group

From the Groups tab, select the **New** button next to the Group Name drop-down list.

- Enter the proposed group name within the text box and click on the **OK** button.
- Next, to add an individual attribute to the group, click the **Add** button below the report view.
- In the Add Attribute dialog, enter the attribute tag, prompt and value (optional). You can also set the options for attribute mode i.e. Invisible, Constant, Verify and Preset.

Notes

- Attribute tag values are forced to uppercase and spaces are not permitted.
- Attribute modes: Invisible specifies that attribute values are not displayed or printed when you insert the block (ATTDISP overrides Invisible mode). Constant gives attributes a fixed value for block insertions. Verify prompts you to verify that the attribute value is correct when you insert the block. Preset sets the attribute to its default value when you insert a block containing a preset attribute.
- To edit an existing attribute's tag, prompt, value and/or mode see [Help](#) topic Editing Group Attributes.
- If an attribute group is deleted, its corresponding contents (attributes) are also deleted.

Editing Group Attributes

Highlight the attribute for editing in the report view and double-click it to display the Edit Attribute dialog.

Attributes can also be re-positioned within an attribute group by using the **Move Up** and **Move Down** buttons. This will affect the prompt sequence when the attribute group is next attached to a block.

To edit the current attribute group's standard AutoCAD properties and/or text options, select the **Properties** tab.

To delete an attribute from the current group, highlight the attribute and press the **Del** key.

Attaching Groups to Blocks

Attribute groups can be attached to a set of entities or an existing block.

- Choose the relevant group and click on the **Attach** button.
- Select the objects that will make up the new block.
- Specify the insertion point for the first attribute within the group and, if not already defined, the text height.
- Specify the insertion point for the next attribute or press **Return** to position it below the last attribute.
- Repeat point 4 until all attributes are correctly positioned.
- Specify the insertion point for the block.
- Next, enter a description in the Create New Block dialog and click on the **OK** button.

Note the standard AutoCAD Edit Attributes dialog will then prompt for any vacant attribute values (optional).

Hatch Manager

Hatch Manager provides the solution to all your hatch creation and management needs. You can build entire libraries from scratch, add existing PAT files in seconds or create your own unique patterns from existing drawing objects. The software also links directly into the AutoCAD *Boundary Hatch* (Bhatch) dialog, ensuring all your patterns remain fully featured with options such as associative and non-associative.

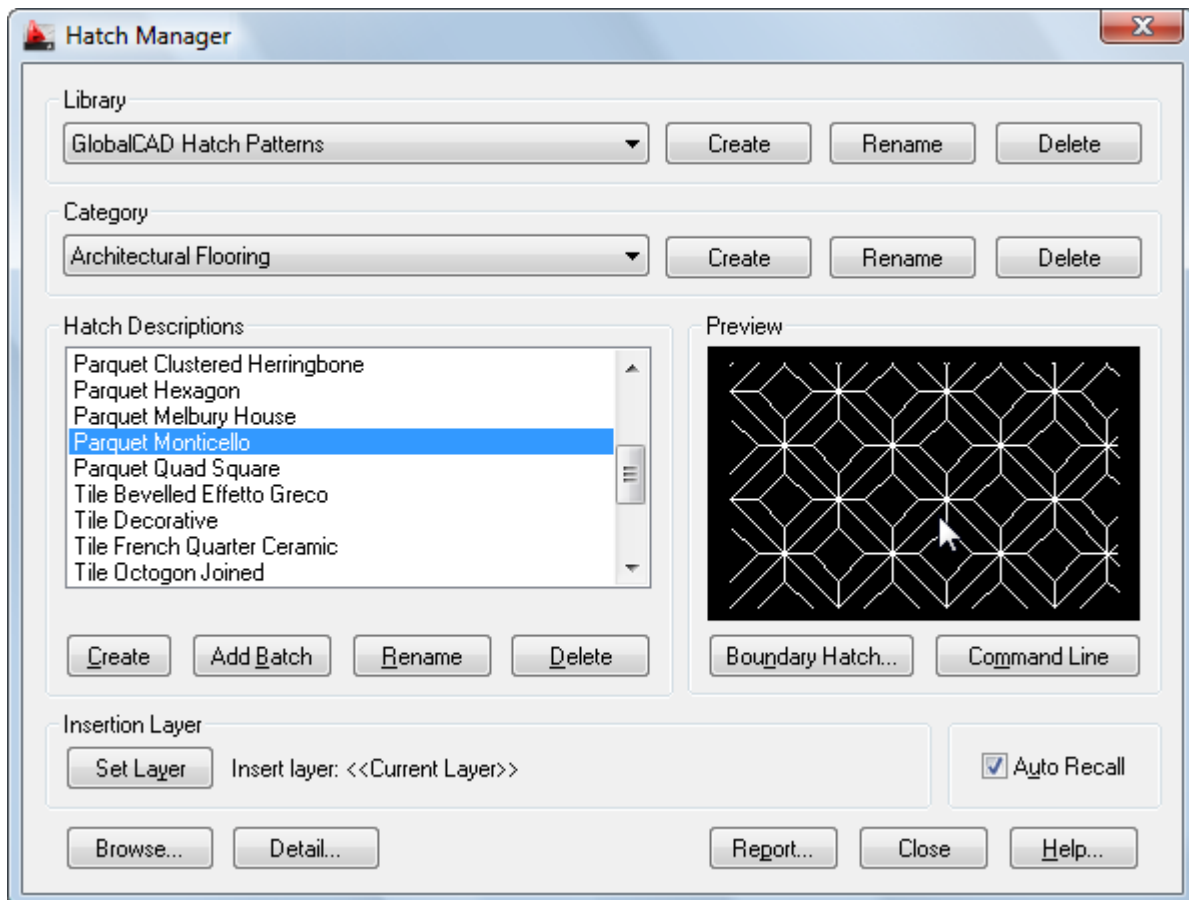
Patterns are organized within distinct libraries with advanced viewing capabilities. They can be identified fast and are accessible right when you need them. Management tools ensure the library database is always up to date, with the ability to view and print pattern details and other library information. Patterns can be contained on local drives or on a network.

With Hatch Manager you can:

- Convert existing drawing entities, blocks and logos into hatch patterns.
- Capture and extract patterns you find in any drawing.
- Add multiple PAT files in seconds using the unique batch-processing tools.
- View and compare patterns quickly and easily within libraries.
- Avoid unnecessary duplication of patterns with full network compatibility.
- Secure your work with full library password protection.
- Effectively manage and keep track of all your hatch patterns.

Initial Steps

Hatch Manager's main dialog displays the contents of the hatch pattern database. The current library and category is shown at the top with the relevant pattern descriptions listed below. Displayed right is the preview image for the pattern currently highlighted and below is shown the current layer for insertion. Libraries are stored within the GlobalCAD...\Libs folder.



Creating a working library and category is the first step in adding your patterns to the database. The library can be assigned a full and meaningful description, such as the working discipline e.g. 'architectural hatch patterns' or maybe a project name.

Note when using the Add Batch feature to add multiple hatch patterns: To successfully add multiple patterns under Hatch Manager, each pattern must be capable of being independently generated within the current AutoCAD session. This means that the .PAT file(s) is valid and opens without error.

Creating a Library

Select the **Create** button under the Library heading from the main display.

- Enter the proposed library description within the text box.
- Next, enter your signature details. Note the default shown is the user's login name.
- Choose **OK** to accept the descriptions and proceed.

To rename an existing library, pick the chosen description from the Library list box and click on the **Rename** button shown right. Next, enter the proposed new library heading within the text box and choose **OK** to accept this description.

Similarly, to delete an existing library, pick the chosen description from the Library list box and click on the **Delete** button shown right. Next, to confirm your wish to remove this library, click on the **OK** button shown or **Cancel** to exit.

Note that when a library is deleted, its corresponding contents (including patterns) are also deleted.

Creating a Category

Select the **Add** button under the Category heading from the main display.

- Enter the proposed category description within the text box.
- Choose **OK** to accept the description and proceed.

To rename an existing category, pick the chosen description from the Category list box and click on the **Rename** button shown right. Next, enter the proposed new category heading within the text box. Choose **OK** to accept this description.

Similarly, to delete an existing category, pick the chosen description from the Category list box and click on the **Delete** button shown right. Next, to confirm your wish to remove this category, click on the **OK** button shown or **Cancel** to exit.

Note that when a category is deleted, its corresponding contents (including patterns) are also deleted.

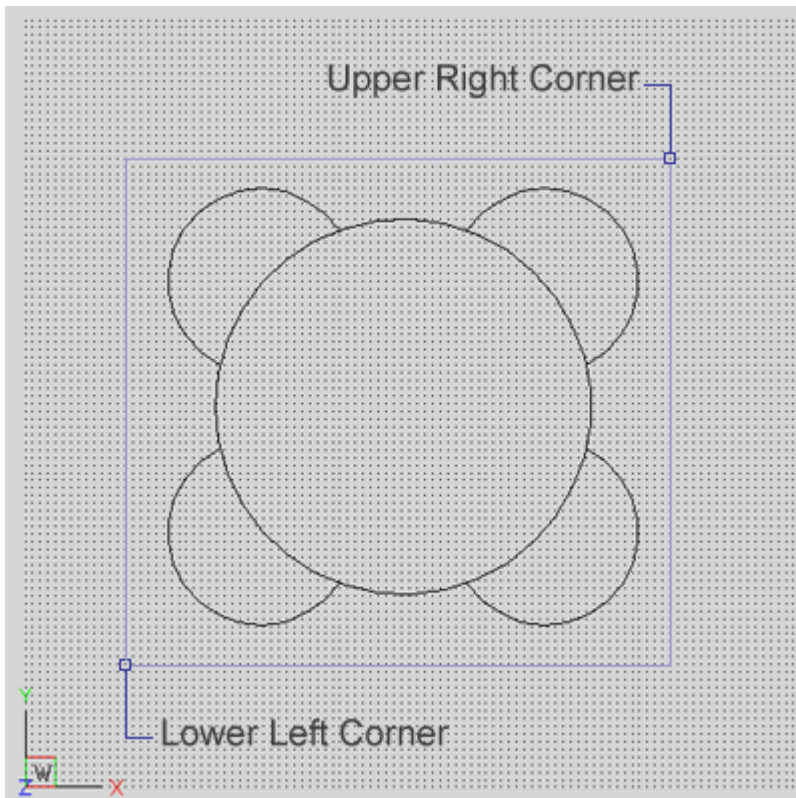
Creating a Hatch Pattern

Hatch patterns can be created from a wide range of existing drawing entities. In addition, advanced formatting options let you control the pattern resolution and spacing between each pattern repetition.

- Once you have created a library and category, select the **Create** button under the Hatch Descriptions heading from the main display.
- From the Create Hatch Pattern dialog, click the **Open Template** button under the Step 1 – Design heading.

A drawing template (DWT file) will be loaded.

- Draw your hatch pattern design within the grid area shown. You can use standard AutoCAD entities as part of your design e.g. Line, Pline, Point, Arc, Circle, Ellipse etc – even Blocks.
- Next, re-run Hatch Manager (shortcut **HM**) and again select the **Create** button under the Hatch Descriptions heading from the main display.
- From the Create Hatch Pattern dialog, click the **Create Pattern** button under the Step 2 – Create heading.
- Specify the pattern **Lower Left Corner** and **Upper Right Corner**. This forms a crossing selection (a rectangular area drawn to select objects fully or partly within its borders) – also see explanation of **Clip Object Extents** option below.

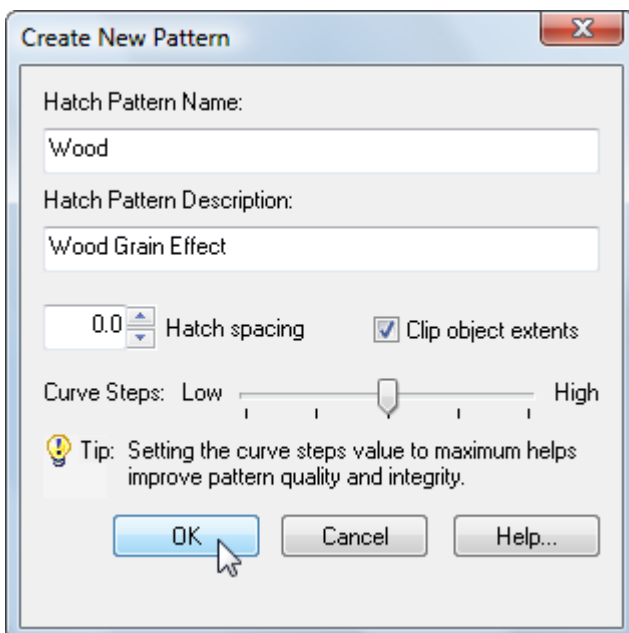


- From the Create New Pattern dialog, enter a name and description for the hatch pattern.

You can control the spacing between each repetition of the hatch pattern with **Hatch Spacing**. Setting the value to 1 will generate a space equal to the size of the pattern, applied to all four sides. The range is limited to 0-255 and is set to 0 by default (no spacing). Values within the range can also be set to one decimal point e.g. 0.5.

The **Clip Object Extents** option relates to the way entities you select are processed during hatch pattern generation. If this option is on, the selection rectangle you specified in point 3 above, will be re-sized (if necessary) to the precise extents of the entities selected. This simplifies entity selection and means you do not have to manually locate and snap to the entity extents yourself. Alternatively, with the Clip Object Extents option turned off, any free space between the selection rectangle you specify and the entities will be used to determine the hatch spacing between each pattern repetition.

You can also increase or reduce the **Curve Steps** by moving the slider – this option relates to the way in which curved entities such as arcs, circles and ellipses are represented within the hatch pattern. Increasing this value can create shapes that are more accurate representations of the selected curved entities.



- Click on the **OK** button and wait for the hatch pattern definition to be generated – this may take a few seconds.
- Next, a dialog is displayed prompting for the **Preview Image Scale**. If you are satisfied with the image, click **Accept**. Otherwise, pick **Define Image Scale**, enter an alternative numerical value (non-zero) in the text box and click **Retry**. You can repeat this process until you are satisfied with the preview image.

Hatch Manager will automatically generate the pattern and zoom in around the selected objects to create the preview image.

Notes

- AutoCAD currently does not support Spline or Text entities for hatch pattern creation. Curved entities increase processing time, please be patient as this can take some moments.
- All entities selected for hatch pattern creation must lie in the current UCS plane. Blocks must be uniformly scaled.

Troubleshooting

- The file size of hatch patterns can increase substantially when derived from entities where circles and/or arcs are present. To reduce pattern file size, replace circles and/or arcs with short line segments where possible.
- When hatching boundaries that are located a long distance from the current UCS origin, patterns may appear to 'break apart'. This is a known issue within AutoCAD. In order to avoid this, temporarily set the UCS origin close to the proposed boundary by typing UCS followed by MOVE at the AutoCAD command line. You can then set the UCS origin back to its default location once the pattern has been successfully generated.
- Occasionally, the default pattern scale of 1.0 in the AutoCAD Boundary Hatch dialog generates the error message 'Hatch spacing too dense, or dash size too small'. This can be remedied by changing the AutoCAD HPSCALE system variable from its default value of 1.0 to an alternative value such as 0.1.

Adding Multiple Patterns

Hatch patterns can also be added in multiple selections with the unique and powerful Add Batch feature. Use this method to create a complete category listing from a set of patterns stored anywhere on disk (local and network drives).

- Select the **Add Batch** button under Hatch Descriptions from the main display.
- From the Add Batch dialog the following options are available, according to preference:
 - Include sub-folders
 - Create categories from sub-folder names
 - Ignore duplicate-named hatch patterns
 - Ignore illegally-named hatch patterns

The Advanced section of the dialog also provides an option to define the preview image scale for each new hatch pattern:

- Define preview image scale

Choose the *Define preview image scale* option if you would like to manually specify how the hatch pattern will be displayed in the Hatch Manager preview image. Each time a hatch pattern is loaded, a Preview Image dialog will be displayed, requesting the image scale to use. This value must be numerical and non-zero.

- Next, click on the **Browse** button to select the folder containing the relevant patterns. Note, if the *Include sub-folders* option has been specified, patterns contained within any sub-folders will also be added. In addition, selecting the *Create categories from sub-folder names* option means that new categories will be created, containing the contents of each sub-folder.
- Returning to the main Add Batch dialog, click on **OK** to proceed.

Please wait while the patterns are now processed and added to the database. Once this operation is complete, the main Hatch Manager dialog displays the current category and new pattern entries.

To rename an existing pattern description, pick the chosen description from the Hatch Descriptions box and click on the **Rename** button shown below. Next, enter the proposed new pattern name within the text box and choose **OK** to accept this description.

Similarly, to delete an existing pattern description, pick the chosen description from the Hatch Descriptions box and click on the **Delete** button shown below. Next, to confirm your wish to remove this description, click on the **OK** button shown or **Cancel** to exit.

Hatching Objects

You can utilize the standard AutoCAD *Bhatch* or *Hatch* command to hatch objects in the current drawing by clicking on the **Boundary Hatch** or **Command Line** button.

The Boundary Hatch button displays the current hatch pattern in the standard AutoCAD boundary hatch dialog. The Command Line button functions in the same way as the AutoCAD standard hatch command i.e. it prompts for the scale, angle and objects to hatch at the AutoCAD command line.

Setting the Insertion Layer

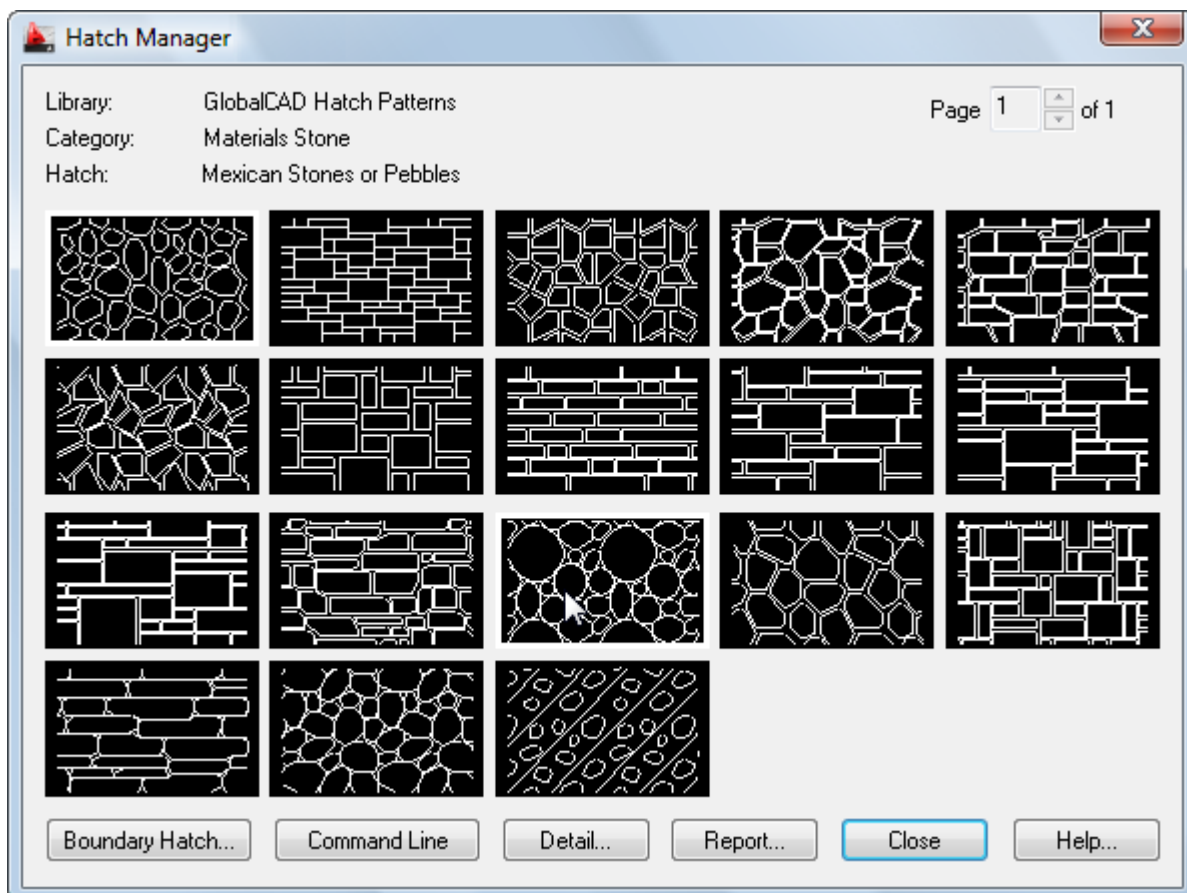
The layer upon which hatch patterns will be created is shown near the bottom of the main dialog display, under the heading Insertion Layer. The default insertion layer is 0. In order to change this setting:

- Select the **Set Layer** button. The existing drawing layers available are displayed in a text box.
- Select the desired layer for pattern creation and click on the **OK** button.

Note, to create a new layer, enter the new name in the Create New Layer text box below and click on the **OK** button. This will be created and made the current layer.

Browsing Libraries

Sometimes it is useful to view and compare hatch patterns simultaneously, usually in order to make an informed choice from similar patterns within a library. Using Hatch Manager's Browse feature you can view patterns in this way, rapidly browsing an entire library if desired.



- Select the **Browse** button from the main display.

The page scroll box is located in the top right-hand corner of the Browse dialog.

- Click on the scroll box arrows to change the page number to view.

Current Library Details

This feature displays information concerning the current library.

Select the **Detail** button from the main display and click on **OK** when finished.

Information displayed includes the library filename and folder location, the library description, creator, current category and total number of hatch patterns present within this category.

Library Protection

Once created, you may wish to protect specific libraries from accidental modification or deletion.

- Select the **Detail** button from the main display.
- Pick the **Library Protected** tick box at the base of the dialog display.
- Enter a unique password and confirm this in the text box below.

All library maintenance functions (i.e. Add, Delete and Rename) will now be disabled until the tick box is de-selected. Note that the original password specified must be re-entered in order to unprotect the library. It is recommended that you make a note of this and store it in a safe place.

Viewing the Hatch Report

Click on the **Report** button to display the full list of hatch patterns stored under the current category.

Patterns are listed in alphanumerical order.

Choose the **Print Report** button to obtain hardcopy records.

Linetype Wizard

Linetype Wizard provides the solution to all your linetype creation and management needs. You can build entire libraries from scratch using standard drawing entities to create both simple and complex linetypes.

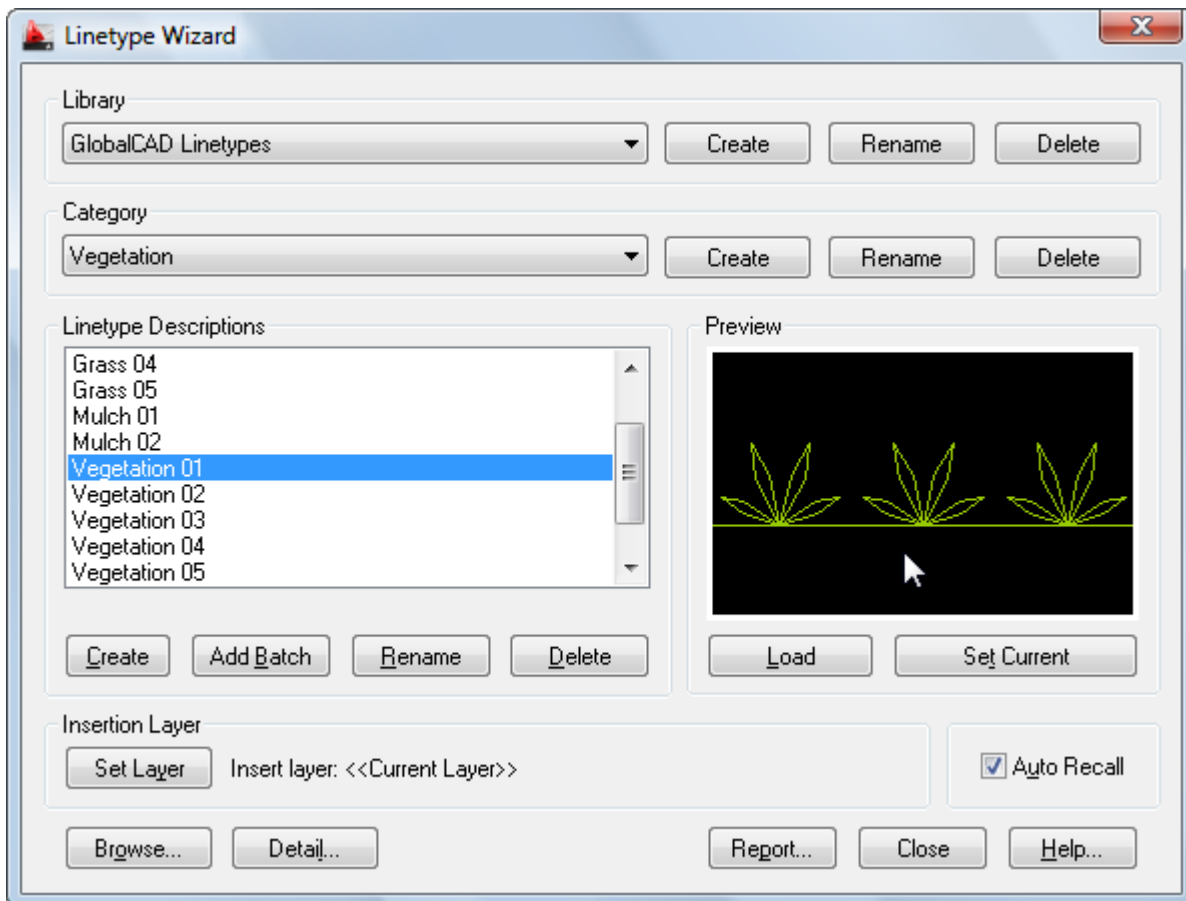
Furthermore, linetypes are organized within distinct libraries with advanced viewing capabilities. They can be identified fast and are accessible right when you need them. Management tools ensure the library database is always up to date, with the ability to view and print linetype details and other information.

With Linetype Wizard you can:

- Create linetypes from existing drawing entities, blocks and text.
- Capture and extract linetypes you find in any drawing.
- View and compare linetypes quickly and easily within libraries.
- Avoid unnecessary duplication of linetypes with full network compatibility.
- Secure your work with full library password protection.
- Effectively manage and keep track of all your linetypes.

Initial Steps

Linetype Wizard's main dialog displays the contents of the linetypes database. The current library and category is shown at the top with the relevant linetype descriptions listed below. Displayed right is the preview image for the linetype currently highlighted and below is shown the current layer for insertion. Libraries are stored within the GlobalCAD\...\Libs folder.



Creating a working library and category is the first step in adding your linetypes to the database. The library can be assigned a full and meaningful description, such as the working discipline e.g. 'architectural linetypes' or maybe a project name.

Creating a Library

Select the **Create** button under the Library heading from the main display.

- Enter the proposed library description within the text box.
- Next, enter your signature details. Note the default shown is the user's login name.
- Choose **OK** to accept the descriptions and proceed.

To rename an existing library, pick the chosen description from the Library list box and click on the **Rename** button shown right. Next, enter the proposed new library heading within the text box and choose **OK** to accept this description.

Similarly, to delete an existing library, pick the chosen description from the Library list box and click on the **Delete** button shown right. Next, to confirm your wish to remove this library, click on the **OK** button shown or **Cancel** to exit.

Note that when a library is deleted, its corresponding contents (including linetypes) are also deleted.

Creating a Category

Select the **Add** button under the Category heading from the main display.

- Enter the proposed category description within the text box.
- Choose **OK** to accept the description and proceed.

To rename an existing category, pick the chosen description from the Category list box and click on the **Rename** button shown right. Next, enter the proposed new category heading within the text box. Choose **OK** to accept this description.

Similarly, to delete an existing category, pick the chosen description from the Category list box and click on the **Delete** button shown right. Next, to confirm your wish to remove this category, click on the **OK** button shown or **Cancel** to exit.

Note that when a category is deleted, its corresponding contents (including linetypes) are also deleted.

Creating a Linetype

Simple linetypes usually consist of a repeating series of dashes, dots and/or text objects. Complex linetypes can also include shapes created from existing drawing entities.

- Draw an approximation of your linetype, using standard AutoCAD draw commands.

This can include Line, Pline, Point, Text, Arc, Circle, Ellipse etc – even blocks!

For best results, ensure you include a short horizontal line at the start and end of your selected entities and that these lines are exactly aligned on the same axis i.e. in a straight line. This will improve the 'joining' of linetype repetitions, especially when the new linetype is applied to polylines, splines etc.

- Select the **Create** button under the Linetype Descriptions heading from the main display.
- Using the AutoCAD object snap, specify the linetype **Start Point** and **End Point**.
- Select the objects that will make up the new linetype.
- From the **Create New Linetype** dialog, enter a name and description for the linetype.

You can also increase or reduce the **Curve Steps** by moving the slider – increasing this value can create shapes that are more accurate representations of the selected entities.

Select the **Define Preview** option if you want to control how the linetype will be scaled in the preview image. After clicking the **OK** button, a dialog will be displayed prompting for the **Preview Image Scale**. If you are satisfied with the image click **Accept**. Otherwise, pick **Define Image Scale**, enter an alternative numerical value (non-zero) in the text box and click **Retry**. You can repeat this process until you are satisfied with the preview image.

- Click on the **OK** button. Linetype Wizard will automatically generate the linetype and zoom in around the selected objects to create the preview image.

Notes

- AutoCAD currently does not support Spline entities for linetype creation and will force text with a non-standard width factor to 1. It also does not support linetype definitions that begin with an empty segment. If you try to create a linetype that begins with an empty segment, the program will automatically add a dot to the beginning of the definition.
- Complex linetypes containing polylines or lightweight polylines may display better with PLINEGEN set to 1.
- All entities selected for linetype creation must lie in the current UCS plane. Blocks must be uniformly scaled.

Troubleshooting

- Sometimes linetypes that are applied to closed polylines (such as rectangles or polygons) are not uniformly applied. Instead, you see long continuous dashes at the juncture of vertices.
- This display of linetypes reflects the default setting for Linetype Generation (disabled). When Linetype Generation is disabled, linetypes that would display a truncated section at the vertices will display a continuous dashed line instead of a portion of the repeated pattern that makes up the linetype. If you enable Linetype Generation in the Properties window, the linetype will continue to the vertices, displaying a truncated section of the linetype.

Use the Properties window to select the polylines that need to be changed.

On the Modify menu, click Properties.

Select the polyline(s) that you want to modify.

In the Properties window, select the field to the right of Linetype Generation, and then select Enable from the drop-down list.

The results are displayed on the screen immediately. Note some linetypes will display a 'gap' or overlapping linetype components at the vertices when Linetype Generation is enabled.

- When sending drawings with complex linetypes electronically to a third-party, use the AutoCAD eTransmit feature, located on the Files drop-down menu. This will create a zip or self-extracting exe transmittal set that includes all dependant support files.

Complex linetypes you create using Linetype Wizard may contain compiled shape files (SHX files) and AutoCAD needs to find these in order to display the drawing correctly. With eTransmit, all SHX files are included with the associated drawing ready for sending. The recipient can then simply extract the drawing and associated support files to a common folder for the drawing to display correctly when opened.

Compiled shape files (SHX files) that reside in AutoCAD complex linetypes have a physical limit of 64 characters. This limit extends to the path so, for example, the shape file C:\Program Files\AutoCAD 2013\Support\Shapes.shx

consists of 44 characters in total. Therefore, as a precaution when sending drawings with dependant complex linetypes, always recommend the recipient opens the eTransmit transmittal set to a short path location.

Loading Linetypes

Linetypes can be loaded into the current drawing by clicking the **Load** button, located below the preview image on the main dialog display. Alternatively, click the **Set Current** button to load the linetype and force it to become the current linetype.

Setting the Insertion Layer

The layer upon which linetypes will be created is shown near the bottom of the main dialog display, under the heading Insertion Layer. The default insertion layer is 0. In order to change this setting:

- Select the **Set Layer** button. The existing drawing layers available are displayed in a text box.
- Select the desired layer for linetype creation and click on the **OK** button.

Note, to create a new layer, enter the new name in the Create New Layer text box below and click on the **OK** button. This will be created and made the current layer.

Browsing Libraries

Sometimes it is useful to view and compare linetypes simultaneously, usually in order to make an informed choice from similar linetypes within a library. Using Linetype Wizard's Browse feature you can view linetypes in this way, rapidly browsing an entire library if desired.

- Select the **Browse** button from the main display.

The page scroll box is located in the top right-hand corner of the Browse dialog.

- Click on the scroll box arrows to change the page number to view.

Current Library Details

This feature displays information concerning the current library.

Select the **Detail** button from the main display and click on **OK** when finished.

Information displayed includes the library filename and folder location, the library description, creator, current category and total number of linetypes present within this category.

Library Protection

Once created, you may wish to protect specific libraries from accidental modification or deletion.

- Select the **Detail** button from the main display.
- Pick the **Library Protected** tick box at the base of the dialog display.
- Enter a unique password and confirm this in the text box below.

All library maintenance functions (i.e. Add, Delete and Rename) will now be disabled until the tick box is de-selected. Note that the original password specified must be re-entered in order to unprotect the library. It is recommended that you make a note of this and store it in a safe place.

Viewing the Linetype Report

Click on the **Report** button to display the full list of linetypes stored under the current category.

Linetypes are listed in alphanumerical order.

Choose the **Print Report** button to obtain hardcopy records.