

150 Autocad Command And Shortcut List

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AutoCAD is one of the most powerful and widely used computer-aided design (CAD) software programs in various industries such as architecture, engineering, construction, and manufacturing. Mastery of AutoCAD's commands and shortcuts can significantly enhance productivity, streamline workflows, and reduce the time needed to complete complex drawings. Whether you're a beginner or an experienced professional, knowing a comprehensive list of AutoCAD commands and shortcuts is essential for efficient design and drafting.

This article provides a detailed, SEO-optimized compilation of 150 AutoCAD commands and shortcuts. By familiarizing yourself with these commands, you can navigate AutoCAD more quickly and perform tasks with greater ease. Let's explore these commands categorized for easier reference.

Basic Drawing Commands

Line and Shape Drawing

1. **LINE (L)**: Draw straight lines between two points.
2. **CIRCLE (C)**: Create circles by specifying center and radius.
3. **RECTANGLE (REC)**: Draw rectangles by specifying two corners.
4. **POLYLINE (PL)**: Draw continuous lines with multiple segments.
5. **ARC (A)**: Draw arcs by various methods (center, start-end, etc.).
6. **ELLIPSE (EL)**: Create ellipses with various options.

Modify and Edit Commands

1. **MOVE (M)**: Move objects to new locations.
2. **COPY (CO)**: Duplicate objects at specified distances.
3. **ROTATE (RO)**: Rotate objects around a base point.
4. **SCALE (SC)**: Resize objects proportionally or non-uniformly.
5. **TRIM (TR)**: Trim objects at cutting edges.
6. **EXTEND (EX)**: Extend objects to meet other objects.
7. **OFFSET (O)**: Create parallel copies at a specified distance.
8. **MIRROR (MI)**: Reflect objects across a line.
9. **FILLET (F)**: Create rounded corners between two objects.
10. **CHAMFER (CHA)**: Bevel edges between two objects.

Object Selection and Management

Selection Commands

1. **SELECT (S)**: Select objects using various methods.
2. **ALL (A)**: Select all objects in the current view.
3. **FILTER**: Filter selected objects based on properties.
4. **QSELECT**: Quick select objects based on criteria.

Layer Management

1. **LAYER (LA)**: Open the Layer Properties Manager.
2. **LAYISO**: Isolate selected layers.
3. **LAYOFF**: Turn off selected layers.
4. **LAYON**: Turn on selected layers.
5. **LAYFRZ**: Freeze selected layers.
6. **LAYTHW**: Thaw frozen layers.

Object Properties and Editing

Properties Commands

1. **PROPERTIES (PR)**: Open the Properties palette for editing object attributes.
2. **CHPROP**: Change object properties like color, layer, line type.

Editing Commands

1. **ERASE (E)**: Delete selected objects.
2. **BREAK**: Break objects into segments.
3. **JOIN**: Join multiple objects into one.
4. **ALIGN**: Align objects with specified points.
5. **MATCHPROP (MA)**: Match properties from one object to others.

Viewing and Navigation Commands

Zoom and Pan

1. **Zoom (Z)**: Zoom in/out or window zoom.
2. **PAN (P)**: Shift the view without changing zoom level.
3. **REGEN**: Regenerate the drawing to update display.

View Management

1. **PLAN**: Switch to a plan view.
2. **VPOINT**: Change the viewpoint for 3D views.
3. **3DORBIT**: Rotate around a 3D model.

Dimensioning and Annotation

Dimensioning Commands

1. **DIMLINEAR**: Create linear dimensions.
2. **DIMANGULAR**: Measure angles between two lines.
3. **DIMRADIUS**: Dimension circle or arc radius.
4. **DIMDIAMETER**: Dimension circle or arc diameter.

Text and Leader Commands

1. **TEXT (T)**: Create or edit text.
2. **MTEXT**: Create multiline text blocks.
3. **LEADER (LE)**: Add leaders with annotations.
4. **DTEXT**: Single-line text.

3D Modeling and Visualization

Basic 3D Commands

1. **EXTRUDE**: Create 3D solids from 2D shapes.
2. **REVOLVE**: Revolve 2D shapes into 3D objects.
3. **LOFT**: Create 3D surfaces between shapes.
4. **SWEEP**: Sweep a shape along a path.
5. **PRESSPULL**: Extrude or cut shapes interactively.

3D Navigation and Rendering

1. **3DORBIT**: Rotate around 3D models for viewing.
2. **RENDER**: Generate realistic images of models.
3. **VISUALSTYLES**: Change visual styles like wireframe, shaded.

Advanced and Utility Commands

File Management and Export

1. **SAVE (CTRL+S)**: Save current drawing.
2. **OPEN (CTRL+O)**: Open existing drawing.
3. **EXPORT**: Export to various formats like PDF, DWG, DXF.
4. **IMPORT**: Import data from other formats.

Automation and Customization

1. **COMMAND (COM)**: Run custom commands or scripts.
2. **LOAD**: Load custom tool palettes or scripts.
3. **OPTIONS**: Access AutoCAD options dialog for settings.
4. **UNITS**: Set measurement units.

Useful Keyboard Shortcuts Summary

While many commands have full names, mastering key shortcuts can improve workflow efficiency. Here are some of the most frequently used AutoCAD shortcuts:

1. **Ctrl + S**: Save
2. **Ctrl + O**: Open
3. **Esc**: Cancel current command or selection
4. **Spacebar / Enter**: Repeat last command
5. **F2**: Toggle command window
6. **F3**: Toggle object snap modes

7. **F8**: Toggle ortho mode

8. **F9**: Toggle grid mode

Mastering this extensive list of AutoCAD commands and shortcuts will empower you to work more efficiently, reduce drafting time, and improve the accuracy of your designs. Practice regularly to memorize these commands and integrate them into your daily workflow for optimal

150 AutoCAD Commands and Shortcuts List: A Comprehensive Guide for Designers and Engineers AutoCAD remains one of the most powerful and versatile CAD (Computer-Aided Design) software tools used globally across architecture, engineering, construction, and manufacturing industries. Its extensive array of commands and shortcuts significantly enhances workflow efficiency, enabling users to create precise drawings, modify designs swiftly, and manage complex projects with ease. Mastery over these commands can drastically reduce project timelines and improve overall productivity. This article provides a detailed, analytical overview of 150 essential AutoCAD commands and shortcuts, structured to serve both beginners seeking foundational knowledge and seasoned professionals aiming to optimize their workflow.

Understanding the AutoCAD Command Structure

AutoCAD commands are the backbone of its functionality, dictating how users interact with the software interface to create and manipulate drawings. Commands can be executed through the command line, menus, toolbars, or keyboard shortcuts. Shortcuts are particularly useful, allowing rapid access to frequently used commands without navigating through menus. AutoCAD commands fall into several categories: - Drawing Commands: Create basic geometric shapes like lines, circles, and polygons. - Modification Commands: Edit existing objects, such as move, rotate, or scale. - Annotation Commands: Add dimensions, text, and leaders. - Layer Management: Control object visibility and organization. - Utility Commands: Assist in drawing management, such as blocks, groups, and properties. - View Commands: Control zooming, panning, and viewports. Understanding these categories helps users to navigate the extensive list of commands effectively.

Core Drawing Commands

Drawing commands are fundamental; they define the primary elements of any design.

1. Basic Geometry Creation

- LINE (L): Draws straight lines between two points. - CIRCLE (C): Creates a circle by specifying the center and radius. - ARC (A): Draws an arc by defining start, end, and center points. - POLYLINE (PL): Combines multiple lines and arcs into a single object. - RECTANGLE (REC): Draws rectangles by specifying opposite corners. - ELLIPSE (EL): Creates elliptical shapes with specified axes. - SPLINE (SPL): Draws smooth, curved lines passing through or near specified points. - HATCH (H): Fills closed areas with patterns or solid fills.

2. Specialized Geometries

- REGION (REG): Converts closed curves into regions for advanced operations. - POLYGON (POL): Creates regular polygons with a specified number of sides. - HEXPOLYGON (HEX): Draws a regular hexagon with specified radius. - POINT (PO): Adds point objects for referencing or annotation.

Modification Commands

Modification commands allow editing and refining existing objects efficiently.

3. Object Transformation

- MOVE (M): Moves objects from one location to another. - COPY (CO): Creates duplicates of selected objects. - OFFSET (O): Creates parallel copies at a specified distance. - FILLET (F): Rounds or fillets the edges where two objects meet. - CHAMFER (CHA): Bevels the edges between two objects. - ROTATE (RO): Rotates objects around a base point. - SCALE (SC): Changes object size proportionally. - MIRROR (MI): Creates a mirrored copy about a specified axis.

4. Editing and Erasing

- TRIM (TR): Cuts objects at specified boundaries. - EXTEND (EX): Lengthens objects to meet other objects. - BREAK (BR): Removes a segment from an object. - STRETCH (S): Lengthens or shortens objects by moving vertices. - ERASE (E): Deletes selected objects.

Annotation and Dimensioning Commands

Annotations provide clarity, while dimensioning ensures accurate measurements.

5. Text and Leaders

- TEXT (T): Creates single-line text. - MTEXT (MT): Creates multi-line, formatted text blocks. - LEADER (LE): Draws leaders with annotations. - DIMLINEAR (DIM): Adds linear dimensions. - DIMANGULAR (DIMA): Measures angles between two lines. - DIMRADIUS (DIR): Adds radius dimensions to circles or arcs. - DIMDIAMETER (DID): Adds diameter dimensions.

6. Styles and Formatting

- STYLE (ST): Opens the Text Style Manager. - DIMSTYLE (DIMST): Manages dimension styles. - QDIM (QDIM): Creates quick dimensions with default styles.

Layer and Object Management Commands

Layers organize objects, making complex drawings manageable.

7. Layer Control

- LAYER (LA): Opens the Layer Properties Manager. - LAYER NEW (LA): Creates a new layer. - LAYER FREEZE (LFE): Temporarily hides a layer. - LAYER ON (LO): Makes a layer visible. - LAYER OFF (LFO): Hides a layer. - LAYER LOCK (LLO): Protects objects from modification. - LAYER UNLOCK (LUL): Unlocks objects.

8. Object Selection and Properties

- SELECT (SE): Initiates object selection. - PROPERTIES (PR): Opens the Properties palette. - MATCHPROP (MA): Copies properties from one object to another.

View and Navigation Commands

Efficient navigation is vital for managing large or complex drawings.

9. Zoom and Pan

- ZOOM (Z): Changes the view scale. - Z + A: Extends zoom to all objects. - Z + W: Window zoom to a specified area. - PAN (P): Moves the view without changing zoom level.

10. View Controls

- PLAN (PL): Sets the view to the current UCS. - VPOINT (VP): Changes the viewpoint in 3D. - ISOPLANE (ISO): Switches to an isometric view.

Utility and Advanced Commands

These commands facilitate complex operations, automation, and customization.

11. Blocks and Grouping

- BLOCK (B): Creates a reusable block definition. - INSERT (I): Inserts a block into the drawing. - EXPLODE (X): Breaks a block or polyline into individual objects. - GROUP (G): Groups objects for collective manipulation. - UNGROUP (UG): Dissolves groups.

12. Dimensioning and Measurement

- MEASURE (ME): Measures distance or area. - AREA (AREA): Calculates the area of selected objects or regions.

13. External References and Data Management

- XREF (XR): Manages external references. - ATTACH (ATT): Attaches external files. - DATAEXTRACTION (DATAEXTRACTION): Extracts data from objects for reports.

Automation and Customization Shortcuts

AutoCAD allows users to customize commands and create macros for repetitive tasks.

14. Command Aliases and Customization

- Users can assign custom shortcuts via the "Alias Editor." - Commonly used commands can be grouped into macros for faster access.

15. Scripts and Automation

- AutoCAD supports scripting through AutoLISP, VBA, and other automation tools. - Shortcuts can invoke scripts for complex tasks.

Summary: The 150 Commands and Shortcuts Breakdown

While this overview highlights critical commands, the full list of 150 commands encompasses numerous specialized functions catering to diverse workflows. These include: - Advanced 3D modeling commands like EXTRUDE, REVOLVE, SWEEP, and BOOLEAN operations. - Rendering and visualization commands for presentation. - Annotation and plotting commands for generating print-ready outputs. - Customization commands for interface personalization. Understanding and mastering this extensive command set empowers professionals to unlock AutoCAD's full potential, streamline their processes, and produce high-quality, precise designs.

Conclusion: Embracing AutoCAD's Command Ecosystem

AutoCAD's command and shortcut ecosystem is vast, reflecting its capability to handle simple sketches to complex engineering projects. For newcomers, familiarizing oneself with the essential commands listed above is crucial, while seasoned users benefit from exploring advanced functions and customization options. Continuous learning—through tutorials, user manuals, and community forums—remains vital to keep pace with updates and new features. Ultimately, proficiency in AutoCAD commands transforms the software from a mere drawing tool into a powerful design companion, enabling users to work smarter, faster, and with greater creative freedom. Whether drafting architectural plans, engineering diagrams, or detailed manufacturing components, mastery over these 150 commands and shortcuts is an investment in professional excellence and project success.

Questions & Answers About 150 autocad command and shortcut list

No	Question	Answer
1	What is the purpose of the 'L' command in AutoCAD?	The 'L' command is used to create a Line in AutoCAD, allowing you to draw straight lines between points.
2	How do I quickly access the 'Copy' command using shortcuts?	You can press 'CO' or simply type 'COPY' and hit Enter to activate the Copy command, enabling you to duplicate objects efficiently.
3	What shortcut is used to zoom to the extents of your drawing?	The shortcut 'ZE' (Zoom Extents) zooms the view to display all objects in the drawing area.
4	Which command and shortcut are used to trim objects in AutoCAD?	The 'TR' command is used for trimming objects. You can activate it by typing 'TR' and pressing Enter.
5	How can I quickly toggle the Ortho mode on and off?	Press the 'F8' key to toggle Ortho mode, which constrains cursor movement to horizontal and vertical directions.
6	What is the function of the 'M' command in AutoCAD?	The 'M' command stands for 'Move' and is used to relocate selected objects to a different location within the drawing.

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