



2D AUTOCAD

ONLINE & OFFLINE

TOOLBAR & SHORT CUT KEYS

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Most Popular Keyboard Shortcuts

Command	Shortcut	Description
L	Line	Draws a line
C	Circle	Draws a circle
PL	Polyline	Draws a polyline
M	Move	Moves selected object
CO or CP	Copy	Copies objects
RO	Rotate	Rotates objects
TR	Trim	Trims objects
EX	Extend	Extends lines
H	Hatch	Fills closed area
SC	Scale	Scales objects
O	Offset	Creates parallel geometry
F	Fillet	Rounds corners
CHA	Chamfer	Creates bevel edges
X	Explode	Breaks objects
Z + Enter + E	Zoom Extents	Zooms to full drawing
Ctrl+Z	Undo	Undo last action
Ctrl+Y	Redo	Redo last action

MORE KEYBOARD COMMANDS ↘ ↘ ↘ ↘ ↘ ↘



AutoCAD 2D Shortcut Keys – Categorized Table

1. Basic Drawing Commands

Command	Shortcut Key	Description
Line	L	Draws straight lines
Polyline	PL	Draws a sequence of connected lines/arcs
Circle	C	Draws a circle
Arc	A	Draws an arc
Rectangle	REC	Draws a rectangle
Ellipse	EL	Draws an ellipse
Hatch	H	Fills a closed area with a hatch
Text (Single-line)	TEXT	Adds single-line text
Text (Multi-line)	MTEXT	Adds multi-line text
Polygon	POL	Draws a regular polygon

2. Modify Commands

Command	Shortcut Key	Description
Move	M	Moves selected objects
Copy	CO or CP	Copies selected objects
Rotate	RO	Rotates objects
Scale	SC	Resizes objects
Mirror	MI	Creates a mirrored copy
Offset	O	Creates parallel copies
Trim	TR	Trims objects to meet edges
Extend	EX	Extends objects to boundaries
Fillet	F	Rounds corners between objects

Command Shortcut Key Description

Chamfer	CHA	Bevels the edge of objects
Explode	X	Breaks compound objects into components
Stretch	S	Stretches objects
Erase	E	Deletes selected objects



3. Annotation and Dimension

Command	Shortcut Key	Description
Dimension (General)	DIM	Adds dimension lines
Leader	LE	Creates a leader line
Multileader	MLD or MLEADER	Adds multi-segment leader
Text Style	ST	Manages text styles
Dimension Style	D	Opens Dimension Style Manager
Table	TABLE	Inserts a table



4. Layers and Properties

Command	Shortcut Key	Description
Layer Properties	LA	Opens Layer Manager
Match Properties	MA	Matches object properties
Properties Palette	CH or PR	Opens object properties
Change Object Layer	CHPROP	Changes object properties



5. Utility and Inquiry Commands

Command Shortcut Key Description

Distance	DI	Measures distance between points
Area	AA	Calculates area and perimeter
List	LI	Displays data about selected object

Command Shortcut Key Description

ID Point	ID	Displays coordinates of a point
Measure	ME	Places points or blocks at intervals

6. View and Zoom Commands

Command Shortcut Key Description

Zoom	Z	Zooms in or out
Zoom Extents	Z > E	Zooms to entire drawing
Pan	P	Moves the drawing view
Redraw	RE	Refreshes the screen
Regen	REG	Regenerates the drawing

7. Blocks and Groups

Command Shortcut Key Description

Block Definition	B	Defines a block
Insert Block	I	Inserts a block
Explode Block	X	Breaks block into elements
Group	GROUP or G	Creates a group of objects
Ungroup	UNGROUP	Disbands a group

8. Object Snap & Drawing Aids

Command Shortcut Key Description

Object Snap On/Off	F3	Toggles object snap
Ortho Mode	F8	Constrains cursor to vertical/horizontal
Snap Mode	F9	Enables snap grid
Grid Display	F7	Toggles grid display
Polar Tracking	F10	Toggles polar tracking
Object Snap Settings	OS	Opens OSNAP settings



9. File Management

Command Shortcut Key Description

New	CTRL + N	Starts a new drawing
Open	CTRL + O	Opens an existing file
Save	CTRL + S	Saves the current file
Save As	SAVEAS	Saves with a new name
Print/Plot	CTRL + P	Prints the drawing
Export	EXPORT	Exports drawing to other formats

10. Undo, Redo, and Selection

Command Shortcut Key Description

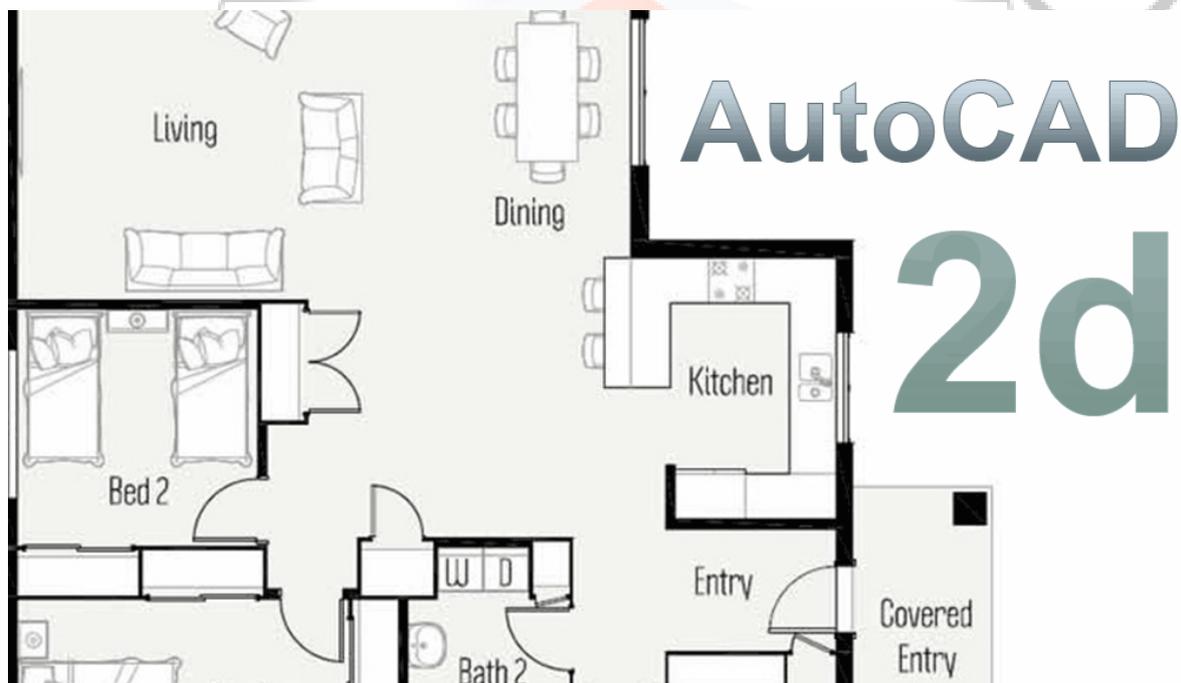
Undo	CTRL + Z	Reverts the last action
Redo	CTRL + Y	Re-applies the last undone action
Select All	CTRL + A	Selects all objects
Cancel	ESC	Cancels current command

Mastering AutoCAD 2D: Toolbars

1: Introduction to AutoCAD 2D

AutoCAD is a powerful computer-aided design (CAD) software developed by Autodesk, widely used for creating 2D and 3D designs. AutoCAD 2D focuses on creating flat representations of objects and is extensively used in fields such as architecture, engineering, construction, interior design, and manufacturing.

This eBook will serve as a comprehensive guide for beginners and intermediate users to understand the toolbars and keyboard shortcuts essential for 2D drafting in AutoCAD.



In this guide, we will explore every commonly used toolbar in AutoCAD 2D, with detailed explanations of each command and their associated shortcuts. Additionally, we will include tips, exercises, and real-world use cases to help you apply what you learn.

2: AutoCAD Interface Overview

Before diving into the commands, it's crucial to understand the interface.

Interface Components:

- **Title Bar:** Shows the name of the file.
- **Menu Bar:** Contains pull-down menus for various functions.
- **Toolbars/Ribbon:** Provides access to tools and commands.
- **Command Line:** Accepts typed commands and displays prompts.
- **Drawing Area:** The main workspace.
- **Model/Layout Tabs:** Switch between model space and paper space.
- **Status Bar:** Displays drawing aids like Snap, Grid, Ortho Mode, etc.



Understanding the layout helps you work more efficiently and navigate the workspace with confidence.

3: Drawing Toolbar

This toolbar contains tools to create the basic geometry.

1. Line (L)

Draws straight line segments.

Command: L

Select first point > Select second point

Use for: Drawing walls, edges, boundaries.

2. Polyline (PL)

Creates a connected sequence of line or arc segments.

Command: PL

Start point > Next point > ...

Use for: Outlines, borders, or paths that need to remain as a single object.

3. Circle (C)

Creates a circle by specifying center and radius/diameter.

Command: C

Center point > Radius or Diameter

Use for: Wheels, holes, round parts.

4. Arc (A)

Draws an arc based on different methods (3-point, center-start-end, etc.).

Command: ARC

Specify start, center, end points

Use for: Curved features.

5. Rectangle (REC)

Draws a rectangle from two diagonal corners.



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Command: REC

First corner > Opposite corner

Use for: Rooms, plates, shapes.

6. Polygon

Draws an equilateral polygon (3 to 1024 sides).

Command: POLYGON

Enter number of sides > Specify center > Specify radius or edge length

7. Ellipse (EL)

Creates an ellipse or elliptical arc.

Command: EL

Axis 1 > Axis 2

Use for: Ovals, cams, tracks.

8. Hatch (H)

Fills a closed area with a pattern or solid fill.

Command: H

Select boundary > Choose pattern

Use for: Material indication in sections.

9. Text (T/MT)

Adds single-line or multi-line text.

Command: TEXT / MTEXT

Specify insertion point > Type text

Use for: Labels, notes.

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4: Modify Toolbar

Modifies existing geometry.

1. Move (M)

Moves objects to a new location.

Command: M

Select object > Base point > Second point

2. Copy (CO/CP)

Duplicates objects.

Command: CO

Select object > Base point > Destination point

3. Rotate (RO)

Rotates objects around a base point.

Command: RO

Select object > Base point > Angle

4. Scale (SC)

Resizes an object.

Command: SC

Select object > Base point > Scale factor

5. Mirror (MI)

Creates a mirrored copy.

Command: MI

Select object > Mirror line > Delete original? Y/N

6. Offset (O)

Creates parallel lines or curves at a specified distance.

Command: O



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Select object > Offset distance > Side

7. Trim (TR)

Trims objects to meet edges.

Command: TR

Select cutting edge > Select object to trim

8. Extend (EX)

Extends objects to meet edges.

Command: EX

Select boundary > Select object to extend

9. Fillet (F)

Rounds corners between two lines.

Command: F

Select first object > Second object

10. Chamfer (CHA)

Bevels edges.

Command: CHA

Distance1 > Distance2 > Select lines

11. Explode (X)

Breaks a compound object into simpler parts.

Command: X

Select object



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5: Annotation Toolbar

Used to add notes and measurements.

1. Dimension (DIM)

Creates multiple types of dimensions.

Command: DIM

Select objects or specify points

2. Leader (LE)

Creates a leader line pointing to text.

Command: LE

Specify arrowhead location > Text location

3. Text (T/MT)

As discussed before in Drawing Toolbar.

4. Multileader (ML)

Creates leaders with multiple lines.

Command: MLEADER

Similar to LEADER with more formatting

5. Table

Creates a table to organize data.

Command: TABLE

Insert rows, columns, data





6: Layers Toolbar

Organize drawings by assigning elements to layers.

1. Layer Properties Manager (LA)

Controls visibility, color, line type.

Command: LA

2. Layer On/Off

Toggles visibility of layers.

Command: LAYON / LAYOFF

3. Freeze/Thaw

Freezes layers to improve performance.

Command: LAYFRZ / LAYTHW

4. Lock/Unlock

Prevents or allows edits.

Command: LAYLCK / LAYULK





7: Properties Toolbar

Modifies object properties like color, line type, and thickness.

1. Properties Palette (CH or PR)

Command: CH or PR

Select object > View and change properties

8: Utilities and Inquiry Tools

Used for measurement and data extraction.

1. Distance (DI)

Measures distance between two points.

Command: DI

Specify points

2. Area (AA)

Calculates area of a region.

Command: AA

Select object or specify corners

3. List (LI)

Lists properties of selected object.

Command: LI

Select object

9: Object Snap Toolbar (OSNAP)

Helps with precision drawing.

Common Snap Points:

- Endpoint
- Midpoint
- Center



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- Quadrant
- Intersection
- Perpendicular
- Tangent

Command: OSNAP or F3 (toggle)

10: Dimension Toolbar

Adds measurement indicators to the drawing.

Tools Include:

- Linear Dimension
- Aligned Dimension
- Angular Dimension
- Radius/Diameter
- Center Mark

Command: DIM



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11: Blocks & Groups Toolbar

Reusable content and grouped objects.

1. Block (B)

Creates a block.

Command: BLOCK

2. Insert (I)

Inserts a block.

Command: I

3. Group (GROUP / G)

Groups objects to move/edit together.

12: Practice Exercises

1. Draw a floor plan with walls, doors, and windows.
2. Use dimensions and annotations to label rooms.
3. Create blocks for doors and reuse them.
4. Organize all elements into proper layers.

13: Tips and Tricks for Speed and Efficiency

- Use MATCHPROP (MA) to match properties quickly.
- Use QSELECT to select objects by property.
- Use LAYISO to isolate a layer.
- Learn command aliases for speed.

14: Conclusion

Mastering AutoCAD 2D takes practice and dedication. By familiarizing yourself with these toolbars and commands, you can speed up your workflow, reduce errors, and produce professional-grade drawings.

Happy Designing!