

AutoCad Command Matrix**Getting Started:**

| <u>Line</u> | <u>Topic</u> | <u>Description</u> |
|-------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Selection | Fundamental to the use of the mouse in AutoCad is the ability to select objects. This is typically done using the left mouse button. Dragging the mouse left after pressing the mouse button will produce a green area. Anything touching the green area will be selected. Dragging the mouse button to the right will produce a blue area. Only those objects completely inside the blue area will be selected. |
| 2 | Dynamic Input: | After a command is entered, and an object is selected, Autocad will prompt you for what it needs, both on the screen and at the bottom of the screen in the command line. |
| 3 | View | In order to move around in a drawing, the simplest way to change the view is using the mouse scroll wheel. Rotating the wheel will zoom in or out in the drawing. Pressing the wheel down will pan in the drawing. |
| 4 | Setting up the mouse | Tools > Options > Toggle shortcut menus in drawing area > Press right click customization. Change all to repeat last command and enter (the top option for default mode, edit mode, and command mode). |
| 5 | To set up length and angular units | Format > Units > Set Length to Architectural; Set Angle precision to 0.000 |
| 6 | Rotation Circle | When rotating an object, the rotation starts at 0 degrees and rotates counterclockwise: So a rotation of +90 would rotate an object from 3 o'clock to 12 o'clock. Similarly, a rotation of -270 would rotate an object from 3 o'clock to 12 o'clock. |
| 7 | Layers | Once you begin working with large amounts of information, keeping like information on its own layer is a must. Tools > Toolbars > Click on layers and layers II to use these important layer toolbars. |

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| 8 | Customizing your UI | Tools > Toolbars > Click on the toolbar to use it as a graphic on the UI |
| 9 | Screen Color | Tools > Options > Display > Colors >click on 2d model space and change to black; click on sheet / layout and change to gray. |
| 10 | Important drafting settings | Tools > Drafting Settings > Object Snap > Select those points on the object that you would like to be able to pick. Recommend to turn on all but "nearest". |
| 11 | Easy drawing and moving | Use ortho (F8) to constrain a line in one of the 4 cardinal directions; get the second point started in a direction and input the numerical distance. The units of the distance are inches by default (entering 20 is 20 inches. An entry of 20' is 20 feet.) This same function can be used with many commands, the move and copy commands among them. |
| 12 | Draw Order | Tools > Draw Order > Pick bring to front, send to back to see the elements as you need to. |
| 13 | Xref | |
| 14 | Viewports | |
| 15 | Layers | |
| 16 | | |
| 17 | Using this matrix: | |
| 18 | | |
| 19 | Command | This word, when typed into the system, will initiate the command in Autocad |
| 20 | Shortcut | This column details a shortcut letter or letters that can be used to initiate the command. After typing in the shortcut hit enter or use the right mouse button to enter the text (recommended). If Autocad needs more information from you to execute the command, it will prompt you for this information both next to the cursor (on the screen) and at the bottom of the page, in the command line. |
| 21 | Function | This column describes some of the useful qualities of the command. |
| 22 | | ⓪ : Refers to the right mouse button. This is equivalent to pressing the enter key on the keyboard. |

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| 23 | | | | Refers to the left mouse button. This is used to select an object that the command will act upon. For some commands, the selection will need to be made directly on an object; for others, the selection area function can be used. |
| 24 | | | | |
| 25 | | | | |
| 26 | Command | Shortcut | | Function |
| 27 | | | | |
| 28 | Edit Tab | | | |
| 29 | | | | |
| 30 | Copy Clip | Ctrl- | C | Copy Clip |
| 31 | Cut | Ctrl- | X | Cut |
| 32 | Paste | Ctrl- | V | Paste |
| 33 | Undo | Ctrl- | Z | Undo |
| 34 | Select All | Ctrl- | A | Select All |
| 35 | | | | |
| 36 | View Tab | | | |
| 37 | Redraw | R | | Redraws the objects on the screen; removing misc. marks from other processes. |
| 38 | Regen | RE | | Regenerates all objects on the screen. |
| 39 | Regenall | N/A | | Regenerates all objects in a file. |
| 40 | | Z0E0 | | Zoom Extents. Zooms out to include all of the elements in a drawing. |
| 41 | Rotate View | | | 3D Views > Viewport Presets > option (absolute to WCS or Relative to UCS) |
| 42 | | | | |
| 43 | Tools Tab | | | |
| 44 | List | LI | | Lists the properties of an object. |
| 45 | Dist | D | | Lists the length between 2 points. |
| 46 | Area | N/A | | Lists the area between at least 3 points. Take care to close the shape to the starting point - use polylines to keep a record of the area. |
| 47 | New UCS | | | Select Z option - enter rotation angle. Use in combination with view tab above. |
| 48 | | | | |
| 49 | Draw Tab | | | |
| 50 | Line | L | | Draws a line that can be listed for length and angle information. Use the form "@2,3" to draw the second part of a line that is 2" in the x direction and 3" in the y direction from the starting point. |

| 26 | Command | Shortcut | Function |
|----|-------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 51 | Pline | PL | Draws a polyline that can be closed. Can be listed to reveal perimeter and area. |
| 52 | Rectangle | N/A | Draws a rectangle. This function has no shortcut. |
| 53 | Circle | C | Draws a circle. |
| 54 | Arc | A | Draws an arc. |
| 55 | _Block | B | Defines a repeatable, sometimes complex element; the element can be redefined and the change will update each copy of the block in a drawing. Chose the insertion point of the block wisely. |
| 56 | Mtext | T | Enter multiline text using a text box. |
| 57 | Hatch | H | Fills a clearly defined area with a pattern. |
| 58 | | | |
| 59 | Modify Tab | | |
| 60 | Copy | CO | Copies an object many times with one command if you wish. |
| 61 | Move | M | |
| 62 | Offset | O | Copies a line to the offset distance, parallel to the initial line. |
| 63 | Trim | TR | Cuts of the end of an object, using another object to set the boundary. |
| 64 | Extend | EX | Extends one line to another. Use the fence option as a powerful selection tool after initially selecting the object. |
| 65 | Fillet | F | Extends and trims to lines to an intersecting point. Use the fence option as a powerful selection tool after initially selecting the object. |
| 66 | Erase | E | Removes a selected object from a drawing. |
| 67 | Break | BR | After selecting 2 points, a portion of a line is removed. |
| 68 | Mirror | MI | Flips an object over a line midway between the objects current and future location. The current object can be erased at the end of the command. |
| 69 | Scale | Sc | Changes the object's size by a scale factor. |
| 70 | Explode | X | In order to break a block into its constituent elements, it can be exploded. |
| 71 | Array | AR | Allows for the repetition of an object using horizontal & vertical or polar indices. |
| 72 | | | |
| 73 | Wblock | W | Creates a block as defined above, and creates a separate .dwg file of only the block and the layers that it uses. This is useful in creating a block library and for transferring information from one drawing to another. |
| 74 | | | |
| 75 | Keyboard Hotkeys | | |
| 76 | | F2 | Displays previous command lines. |
| 77 | | F3 | Toggles Osnaps |

| 26 | Command | Shortcut | Function |
|----|----------------|-----------------|-----------------------|
| 78 | | F8 | Toggles Ortho |
| 79 | | F11 | Toggles Pick Tracking |