

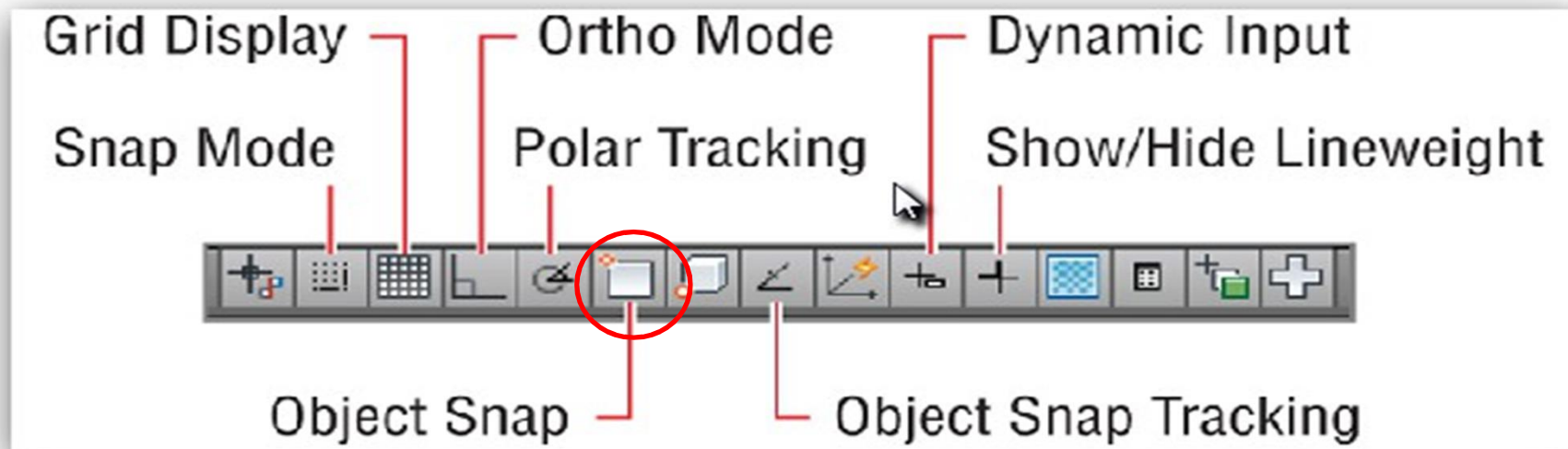


Using Drawing Aids (OBJECT SNAP(

The drawing aids in the AutoCAD® program are like the triangles, compasses, and engineering scales of traditional drafting. Drawing aids are essential modes and methods of entering data.

Most drawing aids can be toggled on or off from the application status bar.

Additional settings and dialog boxes are accessible by right-clicking the individual status bar toggles





Using Drawing Aids

OBJECT SNAPS “OSNAPS(”

object snaps (Osnaps) are one of the handiest tools in AutoCAD.

"**object snaps**" means that they snap to objects, or more precisely, they snap to specific parts of an object.

A line for example has 3 points that you can snap to: a midpoint and two endpoints. A circle has 5 points: a center and 4 quadrants.

To use **Osnaps** effectively, you must know what points an object has that you are able to snap to.

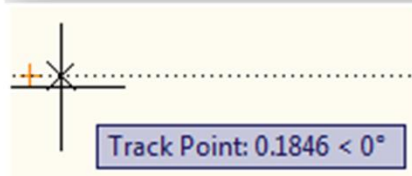
- There are two different ways of working with Osnaps:
 1. in running mode : This means that they are available when needed in the middle of a command.
 2. invoking them individually as required. In this case you can turn it on for one-time use. **(type in the 3 letter shortcut, or shift+right-click.)**

- **NONE** – This command is used to turn off any Osnaps that may be on in running mode. You can also disable your Osnaps by hitting the F3 key, which would be a faster way of doing this.

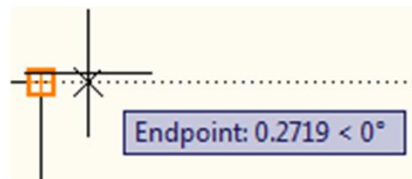


Using Drawing Aids

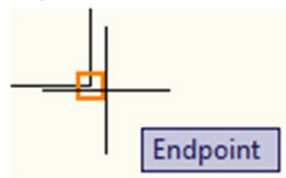
OBJECT SNAPS "OSNAPS"



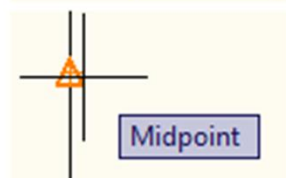
TEMPORARY TRACKING - While not really an Object Snap, this option allows you to pick any point on the screen and track from there. This point can be on an object or not.



FROM - This option allows you to select an Osnap and use it as a reference point. Very similar to Temporary Tracking.



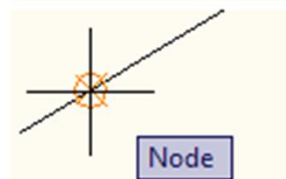
ENDPOINT - This snap is used to get to the exact endpoint of a line, arc or other object that has a definite ending to it. This should be used for joining lines, and dimensioning. In general, you would want this on as a running Osnap in your drawing. The endpoint Osnap is indicated by a small square.



MIDPOINT - This is used to find the exact middle of any object that has a beginning and an end. All lines and arcs have a midpoint. (Circle have a center, not a midpoint.) This is also a good Osnap to have in running mode. The midpoint Osnap is indicated by a small triangle.



CENTER - The center Osnap is used to find the exact center of circles, arc and ellipses. This is also a good Osnap to leave in running mode. To pick the center point, you have to select the object itself, and not an area in the middle of the object. The center Osnap is indicated by a small circle.

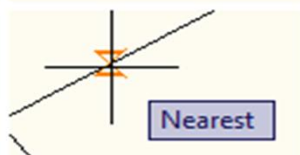
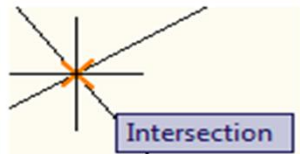
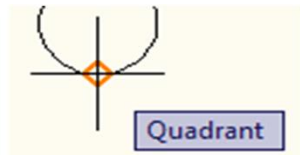


NODE - Nodes are points. They are created using the point command. They are also created when an object is divided. A node Osnap is indicated by a circle with angled crosshairs inside.



Using Drawing Aids

OBJECT SNAPS "OSNAPS"



QUADRANT – Quadrants are the 'corners' of circles and ellipses. Arcs can also have quadrants. The quadrant Osnap is indicated by a diamond. There are four quadrants on every circle.

INTERSECTION – The intersection Osnap appears wherever two objects cross. If you select one object you'll see a cross with three dots indicating that you have to select a second object to find an intersection. Pick on the second object and AutoCAD will find the intersection for you. This is handy when you have a lot of lines in the same area. An 'X' indicates the intersection Osnap.

INSERTION – The insertion Osnap will snap to the insertion points of objects such as blocks, text and attributes. Each object will be different depending on how it was created. The insertion Osnap is shown as two small, offset squares.

PERPENDICULAR – The perpendicular Osnap is used to draw a line from one point to another point at a right angle (90 degrees) to an object. This Osnap can save you having to trim or extend afterwards. If you use the perpendicular Osnap for starting a line, you will get the indicator with 3 dots telling you that the next point is needed to establish the starting point. The perpendicular Osnap is indicated by a square with two extending lines.

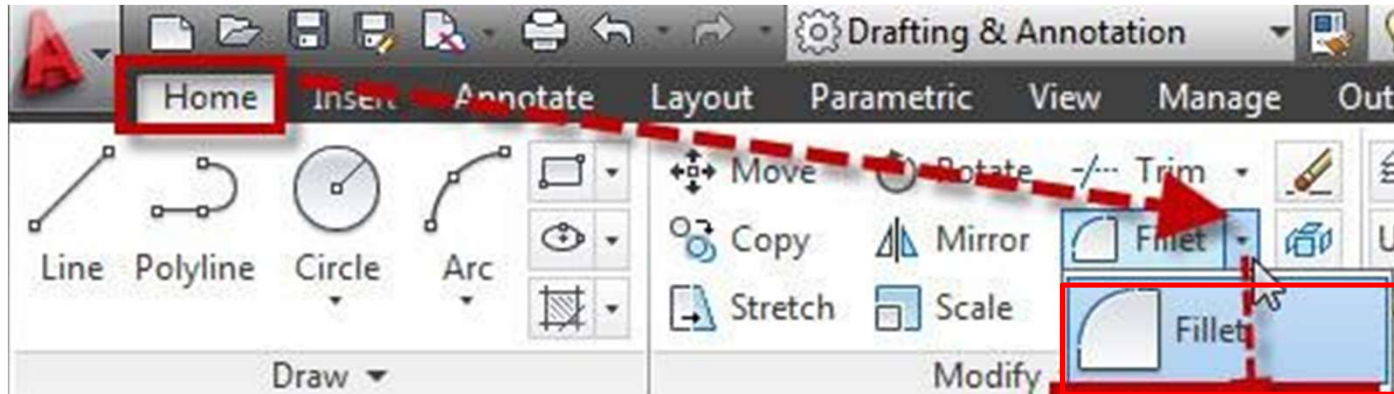
TANGENT – Tangent Osnaps are used on circles, arcs, ellipses and splines. A line tangent to an arc gives you a smooth line off the curve. If you select the tangent Osnap as the first point, your indicator will have three dots following it. This means that the tangential point can not be established until the second point is given. The tangent Osnap is shown as a circle with a line across the top of it.

NEAREST – The nearest Osnap does just as the name implies: it will find the closest point on an object relative to where you started. This is handy for measuring distance and drawing quick lines, but can lead to erroneous results when dimensioning or drawing. This Osnap should rarely be used in running mode, and never for dimensioning. The nearest Osnap is indicated by a triangular hourglass.

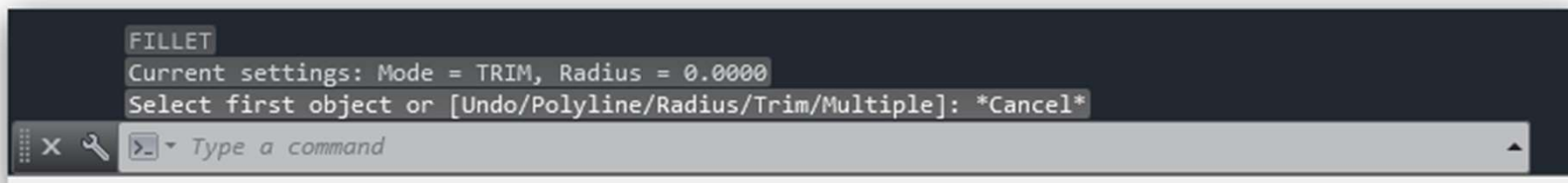
APPARENT INTERSECTION – The Apparent Intersection Osnap is used when two objects appear to intersect on the screen, but do not truly intersect in 3-D space. It also works when any two objects do not intersect, but you need to find the point where they would. This Osnap will also find the true intersection of two crossing objects. This Osnaps has different indicators depending on which mode is needed at the time.



FILLET

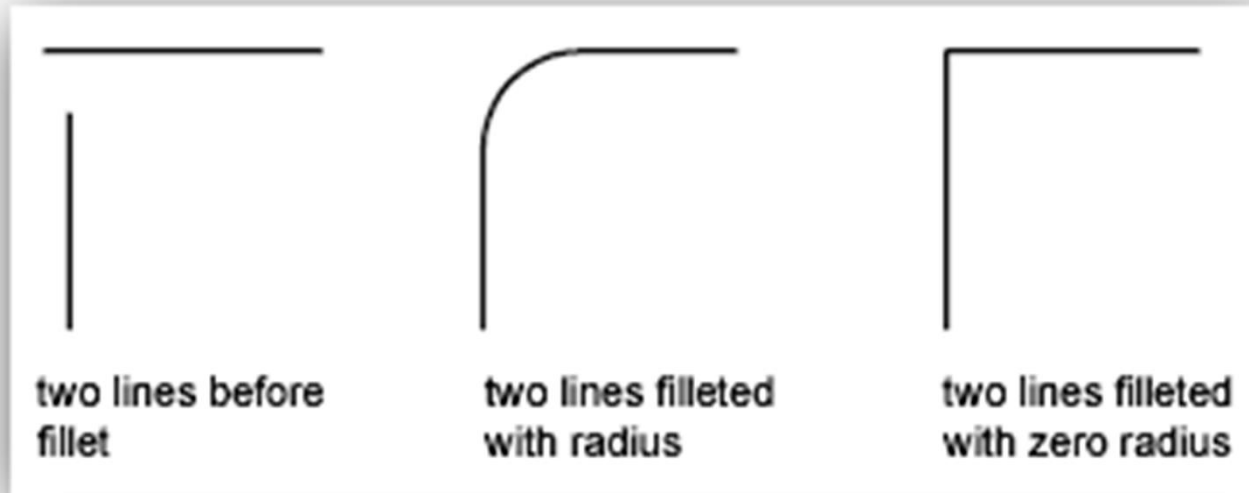


In command : FILLET <enter>





FILLET



The **Fillet** radius is the radius of the arc that connects filleted objects.

Changing the fillet radius affects subsequent fillets.

If you set the fillet radius to 0, filleted objects are trimmed or extended until they intersect, but no arc is created.

- ***You can hold down Shift while selecting the objects to override the current fillet radius with a value of .0***