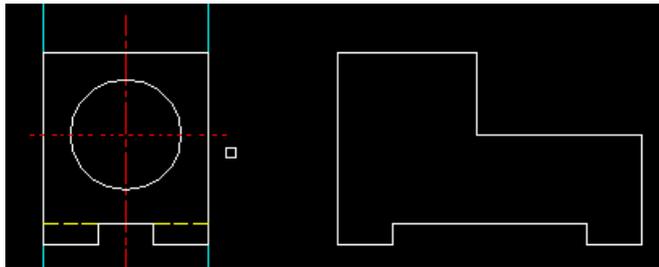# MAK112E Computer Aided Technical Drawing
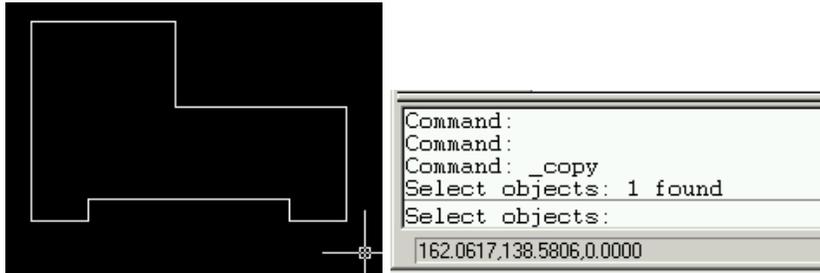## AutoCAD –Modifying Commands

Copy Command


```
Command:
Command:
Command: _copy
Select objects: 1 found
Select objects:
162.0617,138.5806,0.0000
```


Press enter to finish selection and then select the base point of the object using **Endpoint**


```
Command:
Command: _copy
Select objects: 1 found
Select objects:
<Base point or displacement>/Multiple:
Snaps to the closest endpoint of an arc or a line:  endp
```
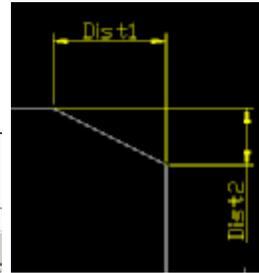
Tracking
From
Point Filters
Endpoint
Midpoint
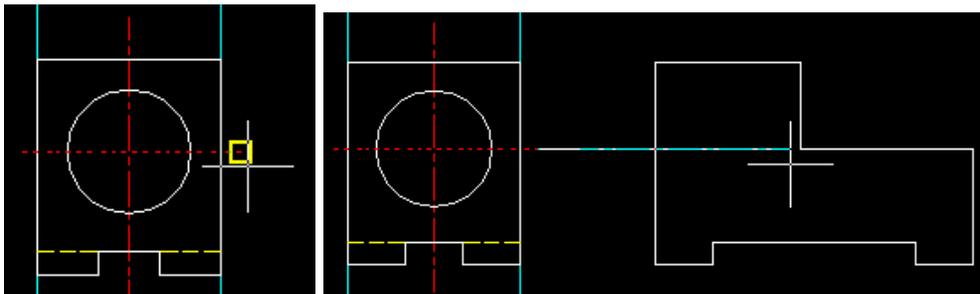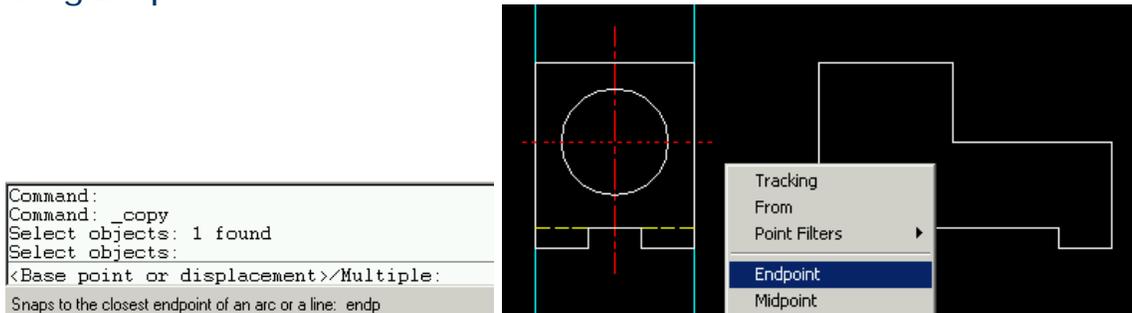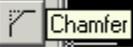
Chamfer

Chamfer command to cut the corner with a given distance. You have to set the Dist1 and Dist2 using d
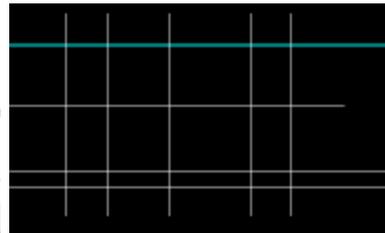


```
Command:
Command:
Command: _chamfer
(TRIM mode) Current chamfer Dist1 = 10.0000, Dist2 = 10.0000
Polyline/Distance/Angle/Trim/Method/<Select first line>: d
```
138.1174,5.5432 ,0.0000   SNAP GRID ORTHO OSNAP MODEL TILE
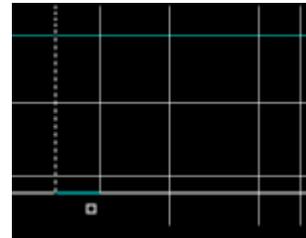


```
(TRIM mode) Current chamfer Dist1 = 10.0000, Dist2 = 10.0000
Polyline/Distance/Angle/Trim/Method/<Select first line>: d
Enter first chamfer distance <10.0000>: 0
Enter second chamfer distance <0.0000>:
Command:
```
272.4388,53.9735 ,0.0000   SNAP GRID ORTHO OSNAP MODEL TILE


```
CHAMFER
(TRIM mode) Current chamfer Dist1 = 0.0000, Dist2 = 0.0000
Polyline/Distance/Angle/Trim/Method/<Select first line>:
Select second line:
```
216.3742,98.3193 ,0.0000   SNAP GRID ORTHO OSNAP MODEL TILE
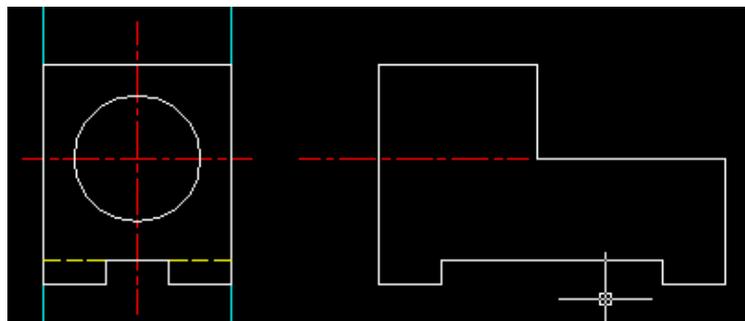


```
Command: _chamfer
(TRIM mode) Current chamfer Dist1 = 0.0000, Dist2 = 0.000
Polyline/Distance/Angle/Trim/Method/<Select first line>:
Select second line:
Command:
```
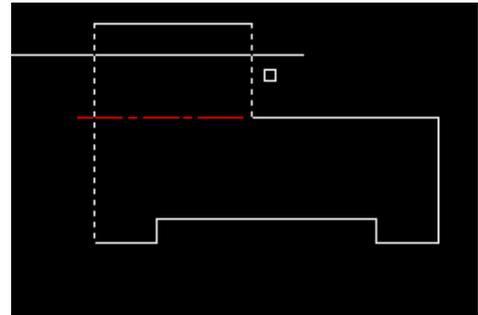234.4784,93.0678 ,0.0000   SNAP GRID ORTHO OSNAP MODEL T
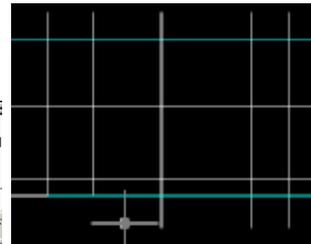
```
Command:
Command: _copy
Select objects: 1 found
Select objects:
<Base point or displacement>/Multiple: _endp of Second point of displacement:    <Ortho on>
```
247.3265,145.0942,0.0000   SNAP GRID ORTHO OSNAP MODEL TILE
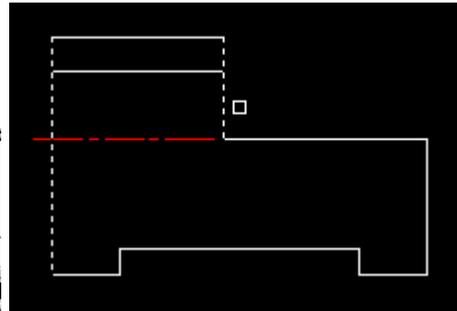
Trim Command


```
Select cutting edges: (Projmode = UCS, Edgemode = No extend)
Select objects: 1 found
Select objects: 1 found
Select objects:
<Select object to trim>/Project/Edge/Undo: |
299.3031,96.5688 ,0.0000        SNAP GRID ORTHO OSNAP MODEL TILE
```



```
Select objects:
<Select object to trim>/Project/Edge/Undo:
<Select object to trim>/Project/Edge/Undo:
<Select object to trim>/Project/Edge/Undo:
<Select object to trim>/Project/Edge/Undo:
255.5026,154.3350,0.0000        SNAP GRID ORT
```
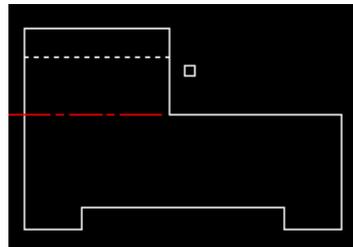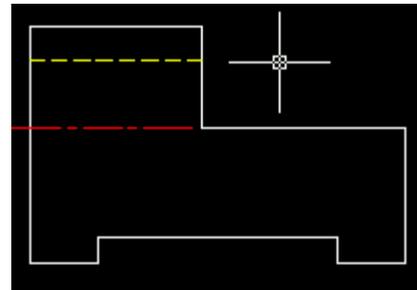
Changing Properties
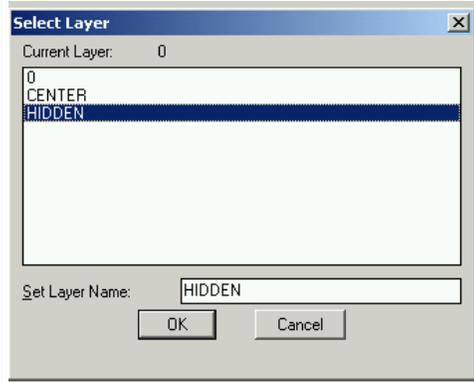## Or select Properties command under Modify Pull-Down menu


```
Modify  Help
  Properties...
  Match Properties
  Object          ▶
```

```
Command:
Command:
Command: ai_propchk
Select objects: Other corner: 1 found
Select objects:
257.8387,160.1699,0.0000        SNAP GRI
```
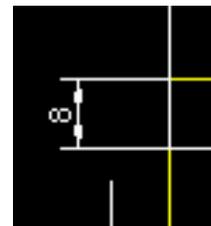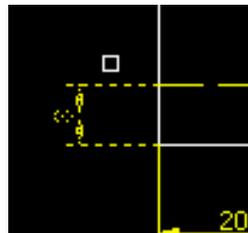
to finish selection press enter
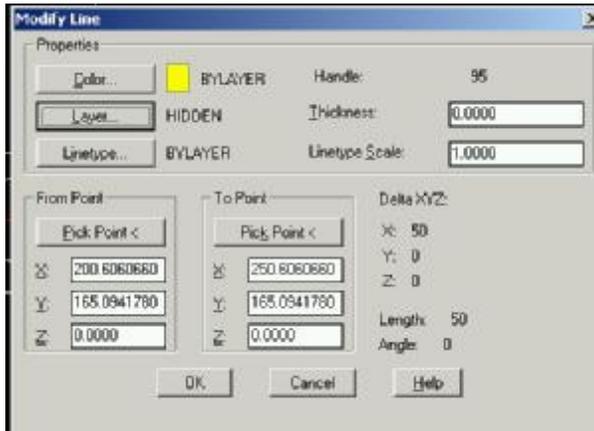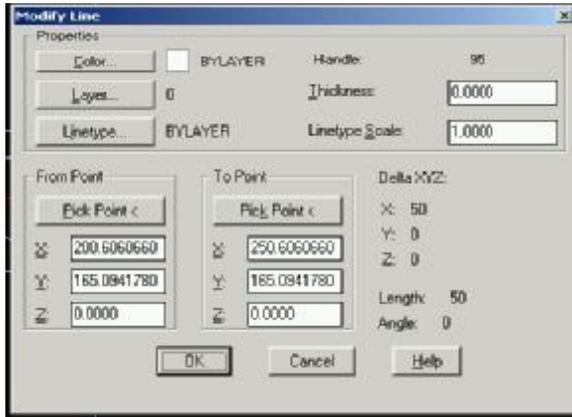
Explode

To change properties of dimension you have to use Explode command, because of the dimension is a block, not a single entity.

At the beginning you have to select an object to explode and hit enter. Selected objects become highlighted with current color (i.e. yellow) and after hitting enter change color to default color (i.e. white).
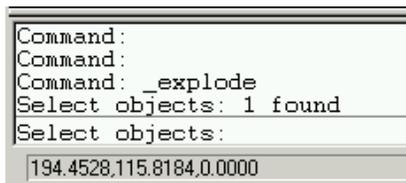
Move

You may change the position of the both arrow. To do this use Move command. Either typing move or just m or selecting the icon from the icon panel.
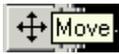
Mouse arrow change into square. Selected arrow becomes hightlighted.


```
Command:
Command:
Command: _move
Select objects: Other corner: 1 found
Select objects:
191.8338,111.5891,0.0000              SNAP GRID
```
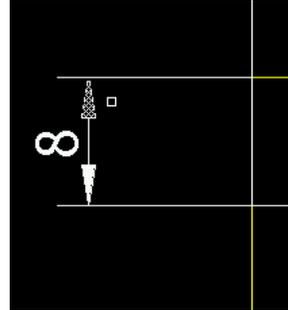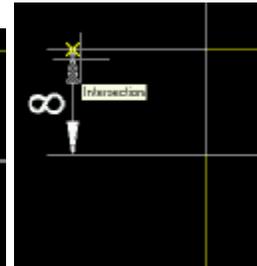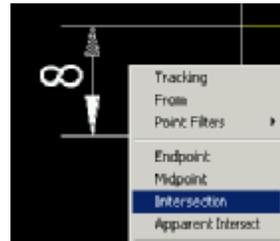
After selection, give the base point of the object to move. To do this osnap command will be helpful. (i.e. İntersection)

```
Command:
Command: _move
Select objects: Other corner: 1 found
Select objects:
Base point or displacement: _int of
Snaps to the intersection of a line, an arc, or a circle: int
```


Then you may give the target point (or second point) for moving object. İntersection osnap command is used again to do this task.

```
Command:
Command: _move
Select objects: Other corner: 1 found
Select objects:
Base point or displacement: _int of Second point of displacement
Snaps to the intersection of a line, an arc, or a circle: int
```

```
Command: _move
Select objects: Other corner: 1 found
Select objects:
Base point or displacement: _int of Second point of displacement: _int of
Command:
195.0644,98.5703,0.0800      SNAP GRID ORTHO OSNAP MODEL TILE
```

The Rotate Command

The Rotate command allows you to rotate a drawing object a new orientation in the drawing Under Modify pull-down menu you may find rotate command.

```
Move
Rotate
Scale
Stretch
Lengthen
```
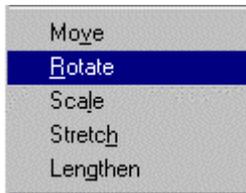
For an example, the small circle (A) on the pitch circle is rotating with 45°. To rotate the circle A, firstly select it and hit the enter, and then determine the rotation base point (i.e. intersection of the axes) and finally give the rotation angle (i.e. 45)

Base point   A

A
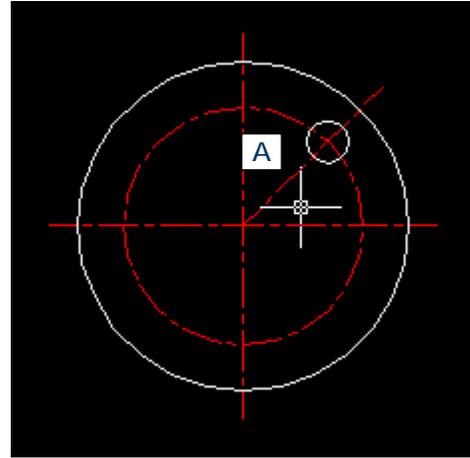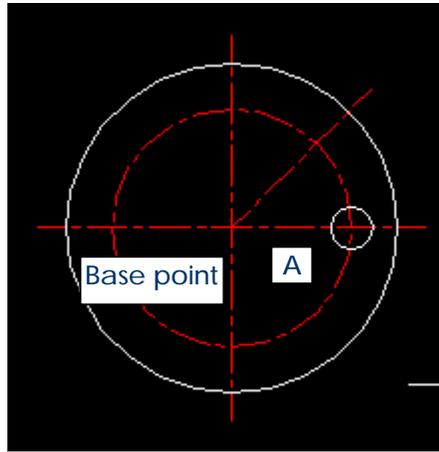
```
Command:
Command: _rotate
Select objects: 1 found
Select objects:
Base point: _int of
<Rotation angle>/Reference: 45
Command: |
```

The Array Command

The Array command copies an object mutiple times to form a regularly spaced rectangular or polar pattern. Under Modify pull-down menu you may find rotate command.

Erase
Copy
Mirror
Offset
Array

Array command has two option (rectangular and polar pattern)

Polar pattern

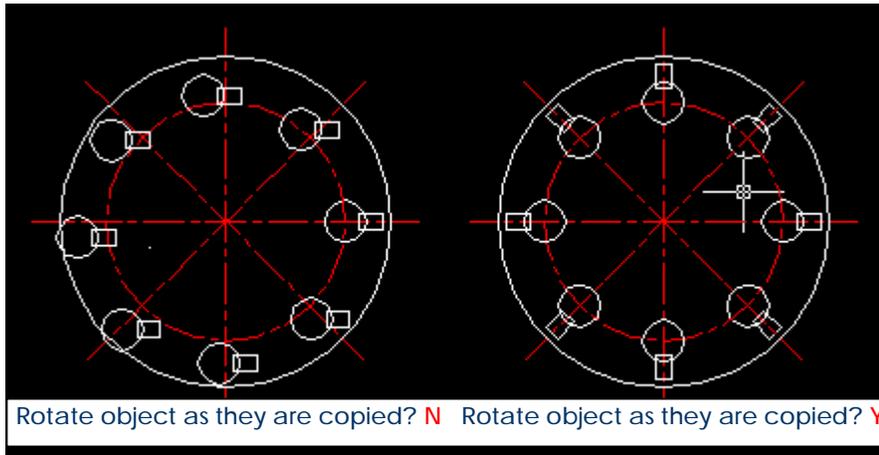For example the small circle (A) is copied 8 times on the pitch circle with the same rotation angle. To copy the circle A, firstly select it and hit the enter, after selecting the polar pattern option (p for polar), determine the rotation base point (i.e. center of the pitch circle), and then give the number of item (i.e. 8), after giving angle to fill, determine the copied objects will be rotated or not.

Base point   A
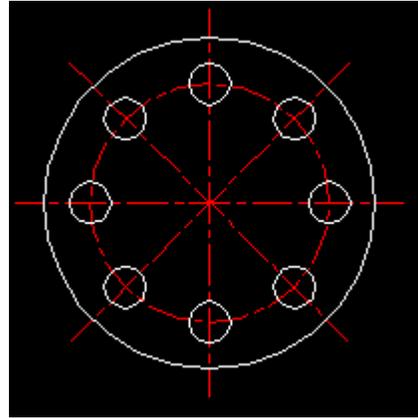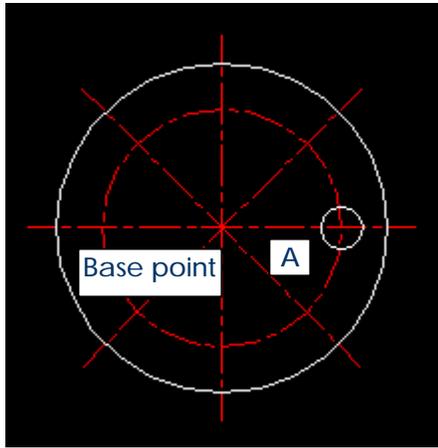

```
Command: _array
Select objects: 1 found
Select objects:
Rectangular or Polar array (<R>/P): p
Base/<Specify center point of array>: _cen of
Number of items: 8
Angle to fill (+=ccw, -=cw) <360>:
Rotate objects as they are copied? <Y>
Command: *Cancel*
Command:
```


Rotate object as they are copied? N   Rotate object as they are copied? Y

Rectangular Pattern

For example the small circle (A) and its axes are copied with the given distances (i.e. 30 and 40). To generate the circle A and the axes, firstly select them and hit the enter to finish selection, after selecting the rectangular pattern option (r for rectangular), determine the number of rows (i.e. 3) and the number of column (i.e. 4), and then enter the distance between the rows (i.e. 30), the distance between the columns (i.e. 40)
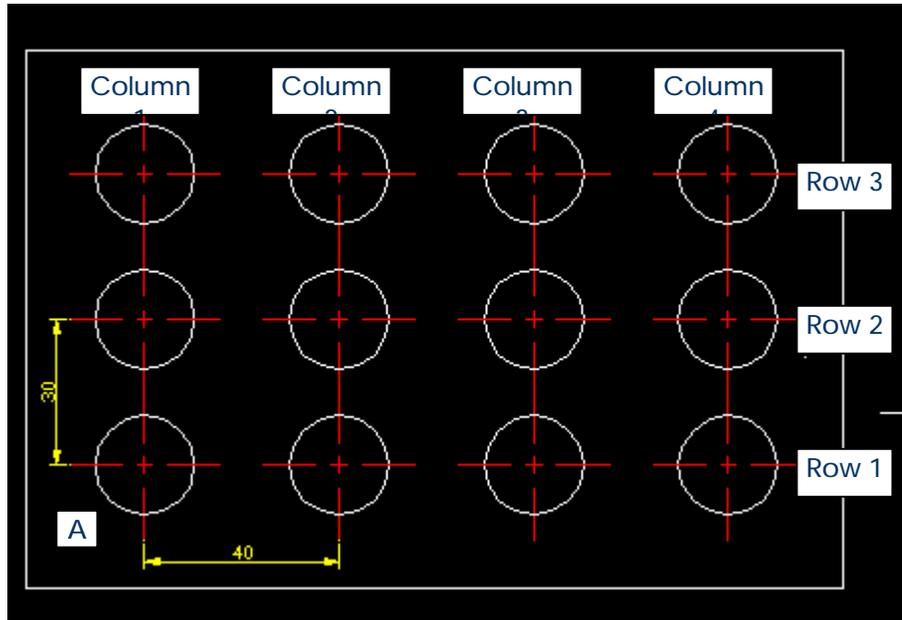
```
Command: _array
Select objects: Other corner: 3 found
Select objects:
Rectangular or Polar array (<R>/P): r
Number of rows (---) <1>: 3
Number of columns (|||) <1>: 4
Unit cell or distance between rows (---): 30
Distance between columns (|||): 40
Command: *Cancel*
```

Fillet command

Fillet command breaks the edges of a line or a corner of a polyline and connects them with an arc.

To select the appropriate radius, to do this type r and give the radius 5.

```
Command: _fillet
(TRIM mode) Current fillet radius = 10.0000
Polyline/Radius/Trim/<Select first object>: r
Enter fillet radius <10.0000>: 5
Command:
190.0000,110.0000,0.0000        SNAP GRID ORTHO O
```

```
Command:
Command: _fillet
(TRIM mode) Current fillet radius = 5.0000
Polyline/Radius/Trim/<Select first object>:
Select second object:
230.0000,130.0000,0.0000        SNAP GRID ORTH
```

1st selected line

2nd selected line