Visibility-Add-Eng Instructions
Creating new blocks:

English is not the primary language of the guy who made this great program, so the first thing I do is rename the functions in the lisp routine by using replace all. The names are as follows:

   "eval_graf_output" change to "**EGO**"
   "visibility_add" changed to "**VisAdd**"
   "visibility-up" changed to "**VisUp**"
   "eddedd" changed to "**SGrip**"
   "tecuch_visibility" changed to "**VisName**"
   "BVPAudit" changed to "**BVPAudit**"
   "element-sel-current-del" changed to "**DelElm**"
   "Element-All-Current-Del" changed to "**DelElmAll**"
   "element-sel-current-insert" changed to "**AddElm**"
   "Visibility_clear" changed to "**VisClr**"
   "properties_add_all_visibility" changed to "**AddElmAll**"
   "sootvetstvie" changed to "**ElemPointer**"
   "move-to-visibilityset" changed to "**MoveVis**"
   "kpblc-objects-hide" changed to "**HideVis**"

I also will only use about three of these commands: VisAdd, VisUp, DelElm. Occasionally I need to use VisName and AddElm. If you plan out your block well enough, you will likely not have to mess with any other commands.

Below is an example of making a block using Visibility-add-eng_1.4 in AutoCAD 11.   This block will be named "CircleThing". It will have a circle with various shapes inside as well as an optional line outside.

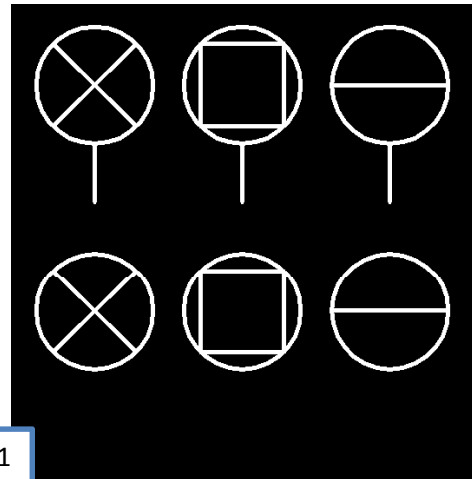This picture (fig 1-1) shows the various combinations.

Fig 1.1

Use the BMAKE command to start your block (fig 2.1).

Draw every element of the block (fig 2.2) then move every optional object off the main block (fig 2.3).
   For clarity, I copy common objects and put them on a different layer so I know to ignore them.

Note the black circle is always going to be present in every instance of the block. It has an origin at the bottom quadrant.
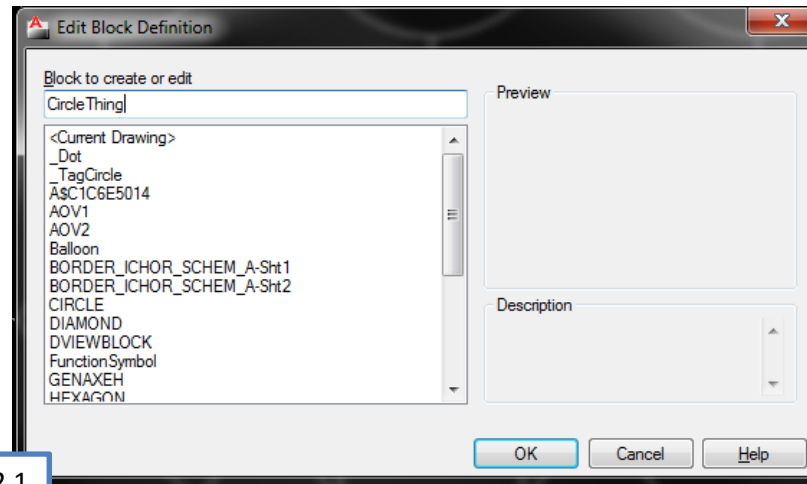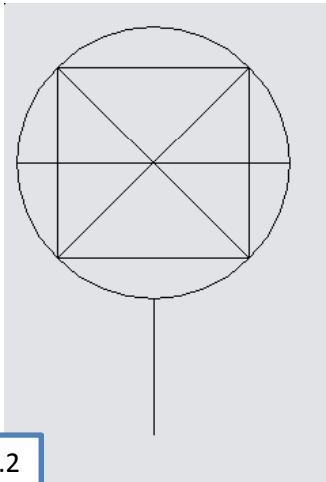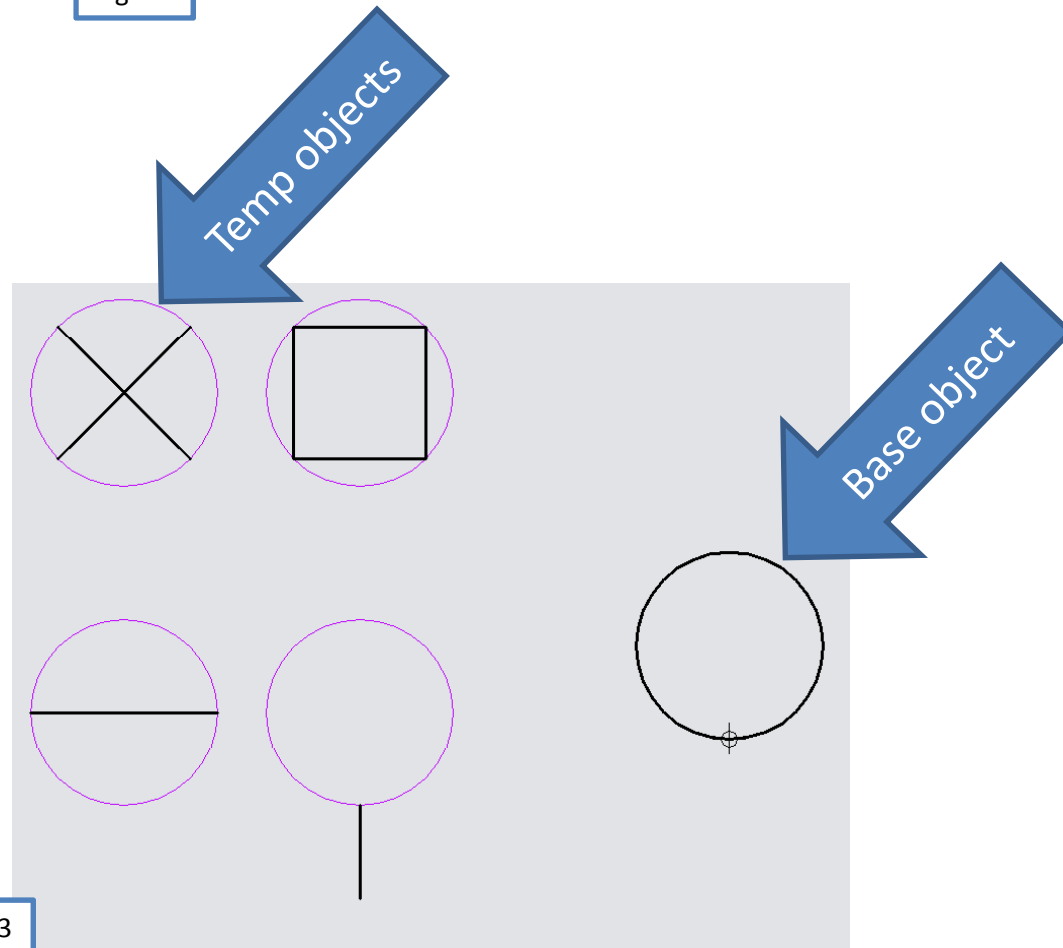

Fig 2.1

Fig 2.2

Temp objects

Base object

Fig 2.3

Create all your actions you want to have before adding any visibility groups. All actions can be moved later, so make them on the affected objects. If it will affect every object, place them on the base object (fig 3.2 and fig 3.3).

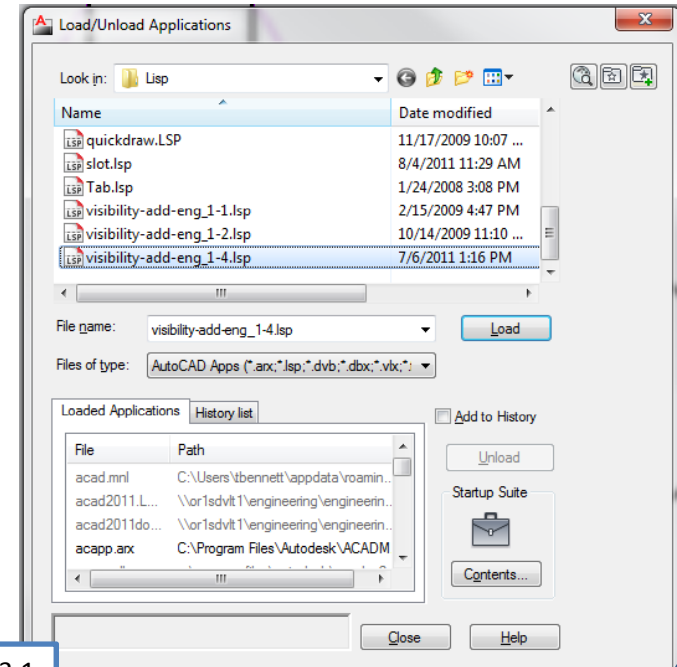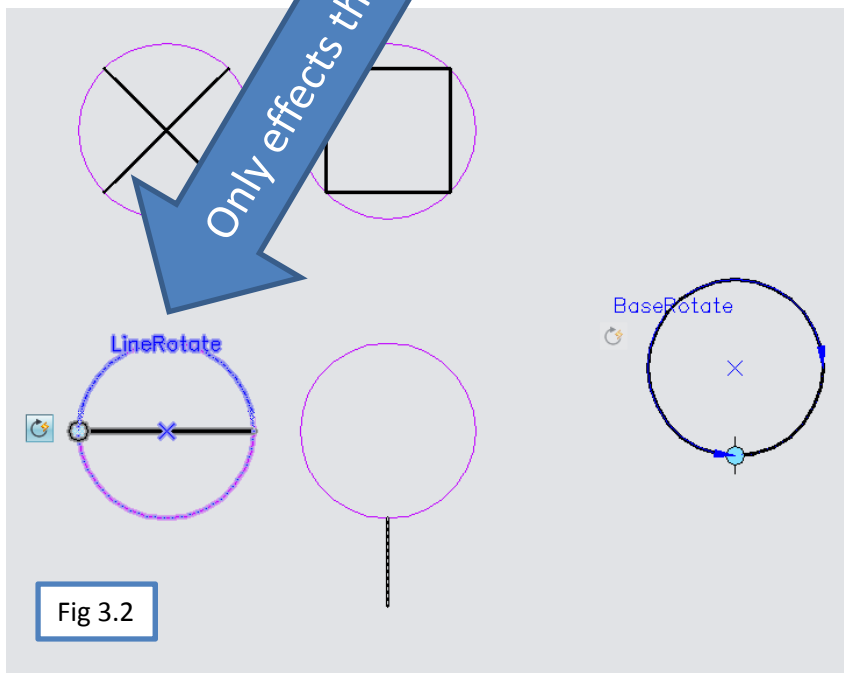Use the Appload command to load Visibility-Add-Eng_1-4.lsp (fig 3.1).

Fig 3.1

Only effects the line

BaseRotate

LineRotate

Fig 3.2

Effects everything
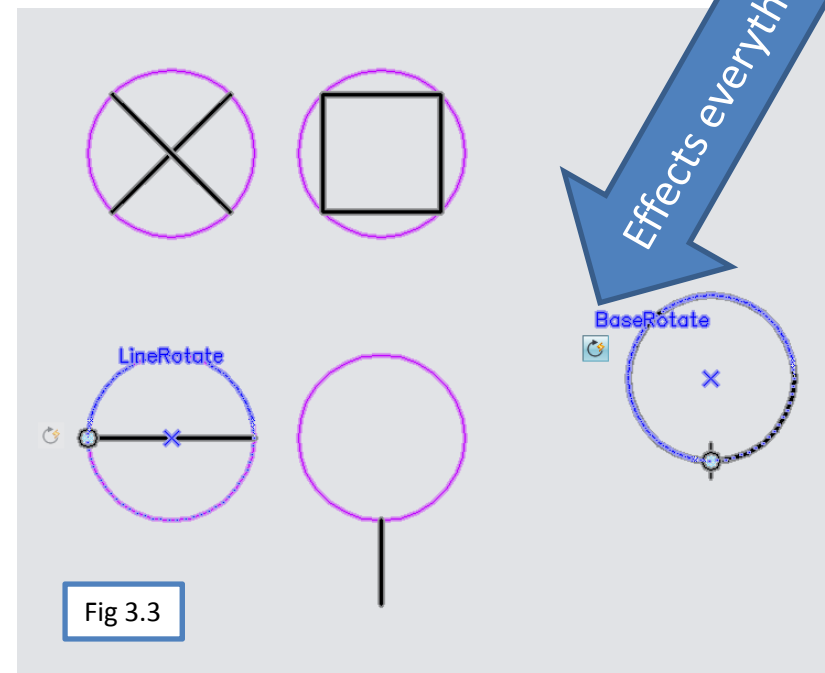
BaseRotate

LineRotate

Fig 3.3

Type (visadd) to place the first visibility group – you will need the parentheses. Rename the group to "default" (fig 4.1).

For some reason, the group does not always get activated properly unless you open and close the "Manage Visibility States" dialog box (fig 4.2 and fig 4.3). Therefore, open the "Manage Visibility States" dialog box.

Create two visibility states. Rename "VisibilityState0" to "default" and make a new state named "blank".

Set the number of grips on the default group to zero. This is the visibility group that needs to be active when you are finished with the block.
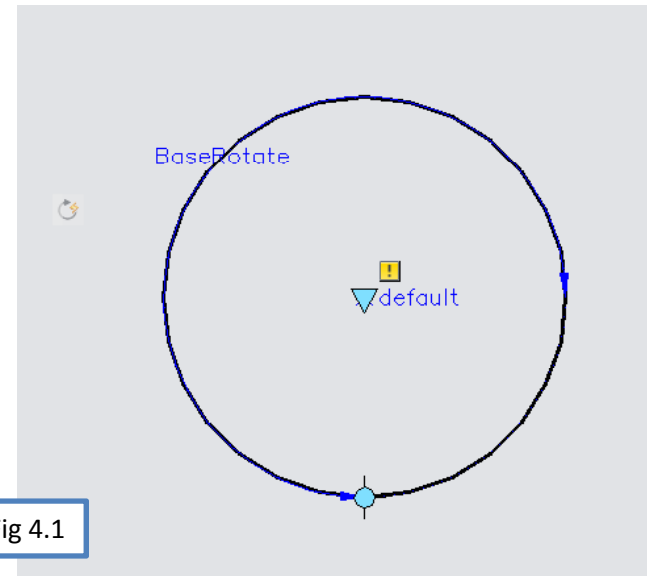

Fig 4.1

Fig 4.2
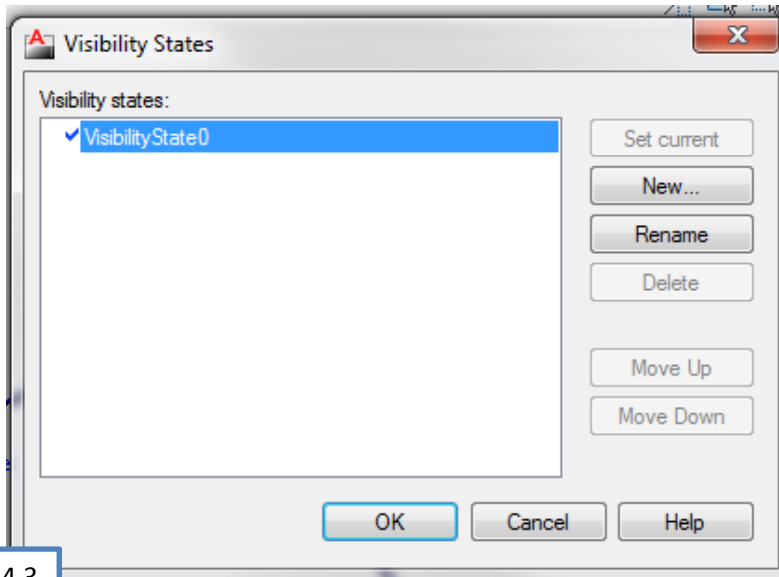
Manage Visibility States

Fig 4.3

Type (delelm) to remove every object that is not seen in every group (fig 5.1).
For example, I always want to see the circle no matter what is inside or outside the circle. Therefore, I need to select every object that is not the circle.

Use (visadd) again to make a visibility group that will control the contents of the circle. Name the group "Circle" (fig 5.2).
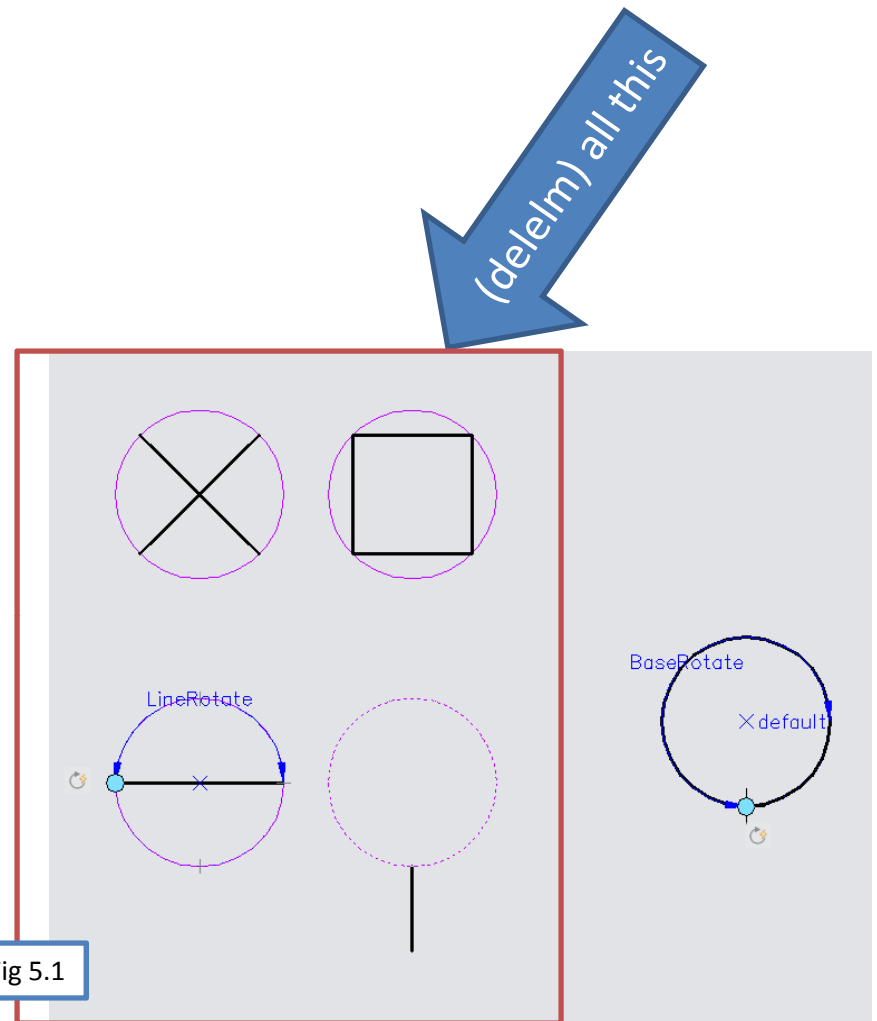
Set the group active using (visup).

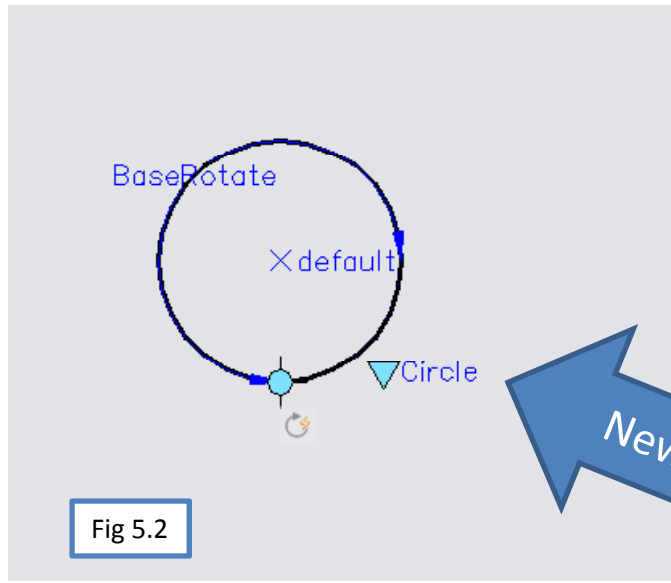(delelm) all this

LineRotate

BaseRotate

×default

BaseRotate

×default

Fig 5.1

BaseRotate

×default

▽Circle

New group

Fig 5.2

Open the "Manage Visibility States" dialog box to keep things from crashing (fig 6.1).

Rename "VisibilityState0" to "None".

Add states named "Line", "Cross", and "Box".

Use the (delelm) to remove all objects that are not part of this visibility group. The base objects are part of every group so do not select them. In this case you will only be selecting the vertical line (fig 6.2).

Toggle through the four states and hide/show objects as appropriate.

Fig 6.1

(delelm) this

LineRotate

BaseRotate

Xdefault

Fig 6.2

Use (visadd) again to make a visibility group that will control the contents of the vertical line. Name the group "Line" (fig 7.1).

Set the group active using (visup).

Open the "Manage Visibility States" dialog box to keep things from crashing (fig 7.2).

Rename "VisibilityState0" to "None".

Add a state named "Line".

Use the (delelm) to remove all objects that are not part of this visibility group. The base objects are part of every group so do not select them.
    In this case you will only be selecting the vertical line (fig 7.3).

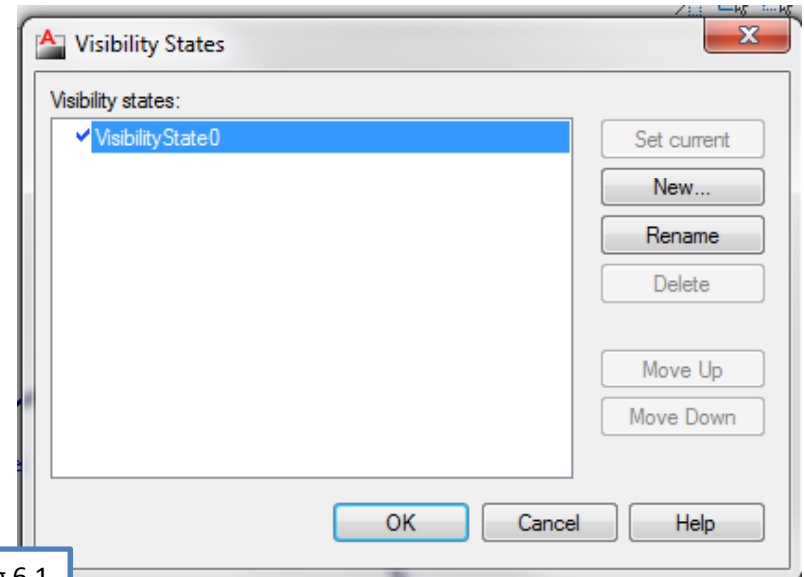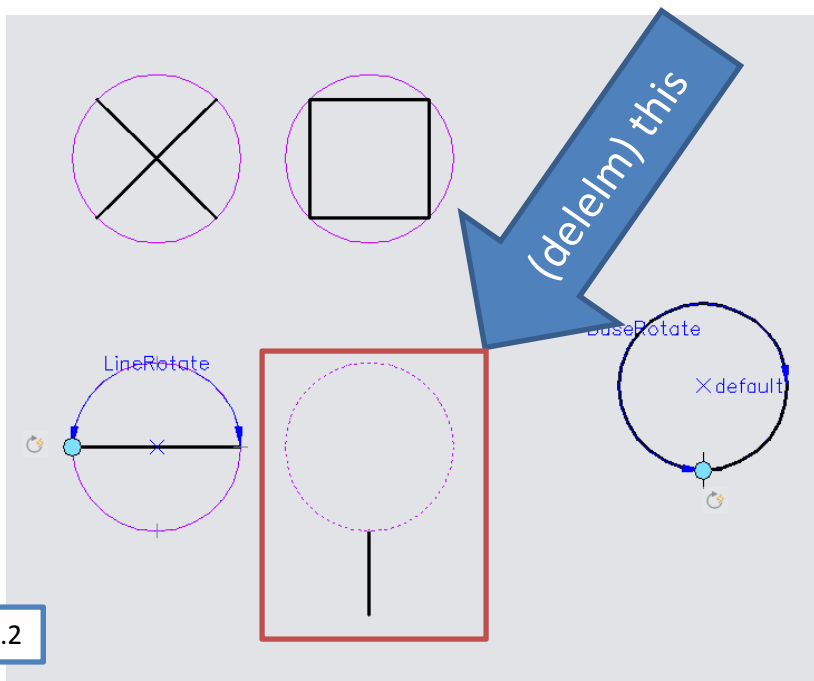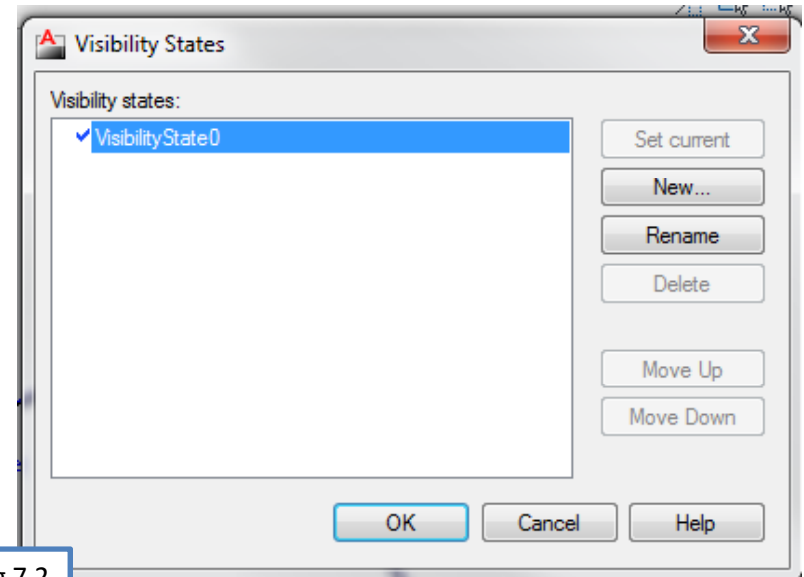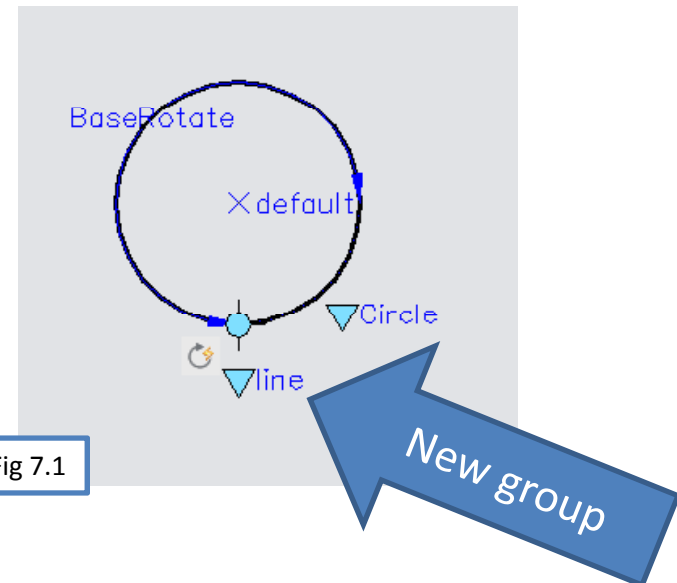Toggle through the four states and hide/show objects as appropriate.

Fig 7.2

Fig 7.1

Fig 7.3
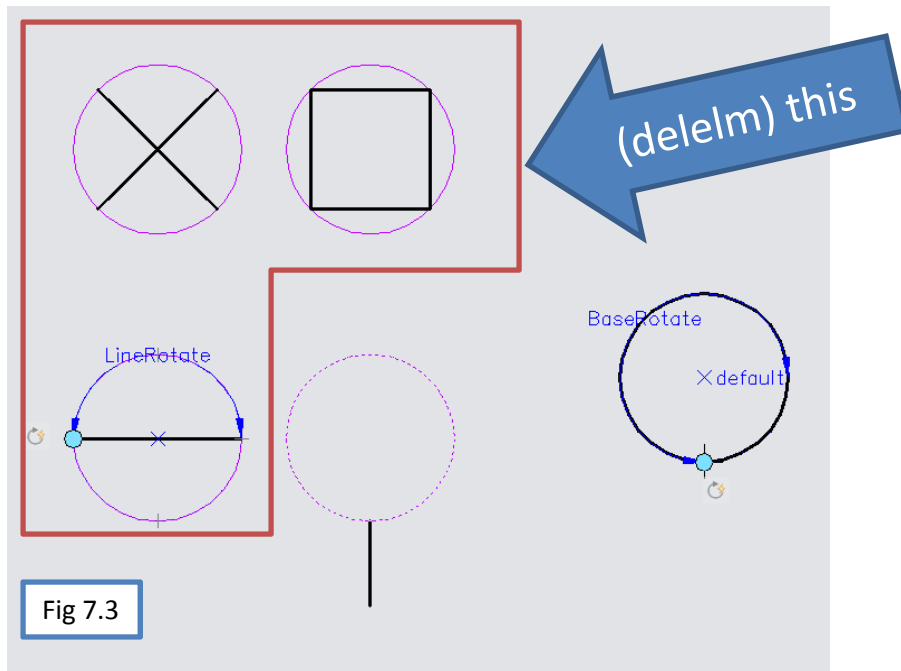
Be sure to update any actions – in this case the BaseRotate needs to have visibility groups "Circle" and "Line" added to them.

Move your objects and actions to their home position and delete all reference geometry (fig 8.1).

Use (visup) to set the "Default" visibility group active.

Close block editor and save your changes.

Delete these circles

Move objects and actions to the home position

LineRotate
BaseRotate
default
Circle
line

Fig 8.1
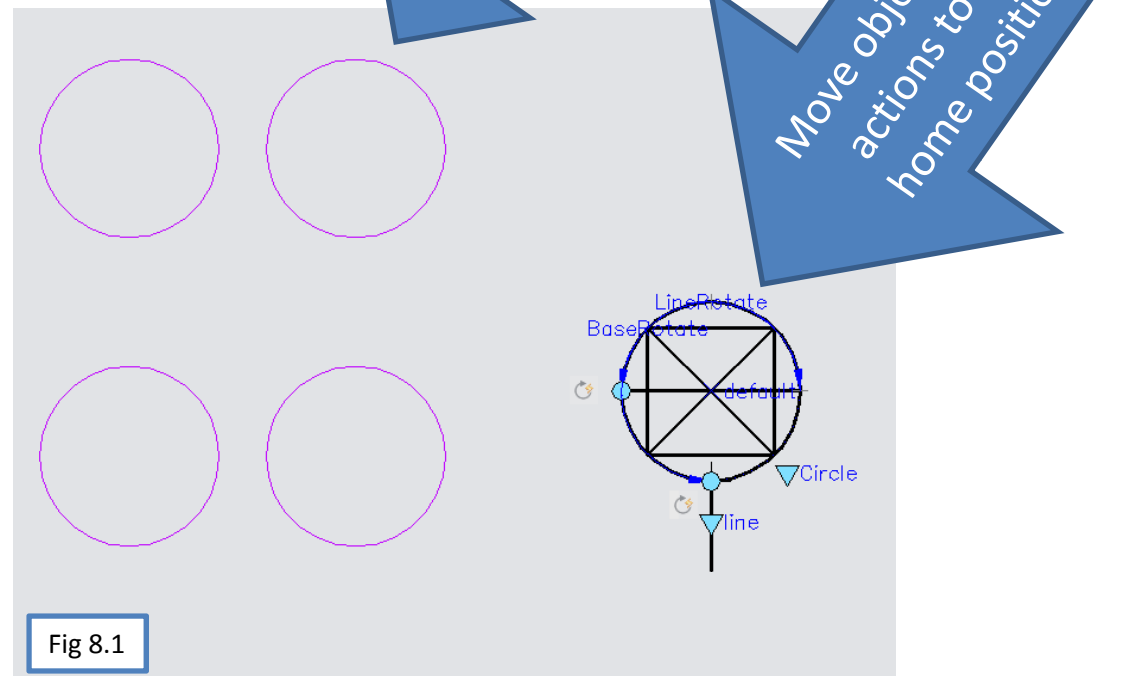
Visibility-Add-Eng Summary of Terms

Objects: Lines, text, attributes used in a block.

Visibility State: A list of states within a visibility group that effect a particular instance of a block.

Visibility Group: A group of visibility states. An instance of a block. These are created with (visadd).

Visibility-Add-Eng Summary of Steps
Creating:

1) Start a new block.
2) Draw all the objects used in the block (including attributes).
3) Create all the actions you need for all the objects.
4) Use Appload to load visibility-add-eng_4-1.lsp.
5) Type (visadd) to add the default visibility group.
6) Set the number of grips to zero.
7) Open the "Manage Visibility States" dialog box and Rename "VisibilityState0" to "Default".
8) Make another visibility state named "Blank" and close the dialog box.
9) Type (delelm) to remove everything from the visibility group except those objects you want to see when the block is first inserted.
   a) The base circle will need to be seen in every group so do not select it.
   b) All other objects (actions are ignored) will need to be turned on and off at run time, so select everything except the circle.
10) Add a new visibility group and name it appropriately.
11) Type (visup) and select the new visibility group to set make it active.
12) Open the "Manage Visibility States" dialog box and Rename "VisibilityState0" to "None".
13) Add any other visibility states that you need for this visibility group then close the dialog box.
14) Type (delelm) and remove any objects that are not used in this visibility group. Do not remove the base objects.
15) Toggle through each visibility state and hide/show the objects.
16) Repeat steps 10 through 15 as many times as necessary.
17) When all visibility groups are added, be sure to update any actions that need to effect all objects.
18) Move all objects to their home position and delete any reference geometry.
19) Use (visup) and select the default visibility group.

Visibility-Add-Eng Summary of Steps
Editing:

1) The main point to remember when editing is to **always open the "Manage Visibility States" dialog box after using (visup)**. If you do not remember, bad things happen.
2) Another point to remember is that you need to set new visibility groups active using (visup) before you can work with them. It isn't obvious that they are not active so use (visname) when you need to check.
3) You will almost always need a state named "None" so get used to opening the "Manage Visibility States" dialog box after creating a new group then rename "VisibilityState0" accordingly.
4) These babies crash if you forget any step, so save often. The rule of thumb is, if you did anything you don't want to do again... save.