



Walt Disney World Swan and Dolphin Resort
Orlando, Florida

AUGI® Tips and Tricks

Donnia Tabor-Hanson - MossCreek Designs

GD12-2 Did you know you could do that? is the question you will be asking each other in this class. Short cuts, some basic LISP routines, speed tips, variables, and ways of using some AutoCAD commands you might not have thought of ... that is what this class is all about. I have been collecting tips and tricks for years and AUGI is my favorite place to find them. Come see some of the latest as well as a few old favorites. You may even have time during class to share some of your own!

About the Speaker:

Donnia has been using AutoCAD since release 1.4. She has taught college-level courses and was the manager of an Autodesk Authorized Training Center for several years. Donnia has experience using AutoCAD in a variety of fields, including architecture, material handling, atomic waste removal and containment, and civil engineering. She currently works with a log home design group. Donnia has been working with AUGI since 1995 and has contributed to AUGI's WorldView and AUGIWorld magazines. Collecting tips and tricks is her passion! She earned her M.S. in Technological and Adult Education from the University of Tennessee.

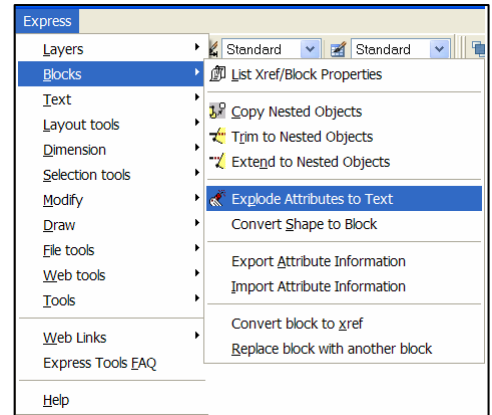
donnia@comcast.net

Tip #1 – Use Burst instead of Explode

Submitted by ceekayem

BURST, an Express Tool, can be used to EXPLODE blocks with attributes. The attributes in the exploded block will take on the original attribute definition's layer and color.

For example, I have a Room Label list routine that inserts a block with attributes. It has the correct layer programmed into it already. Occasionally I don't need all the information in the room label block but I want to use the same layer, font, and text size as the block. I can just use the routine and then BURST the block deleting the block information I don't need.

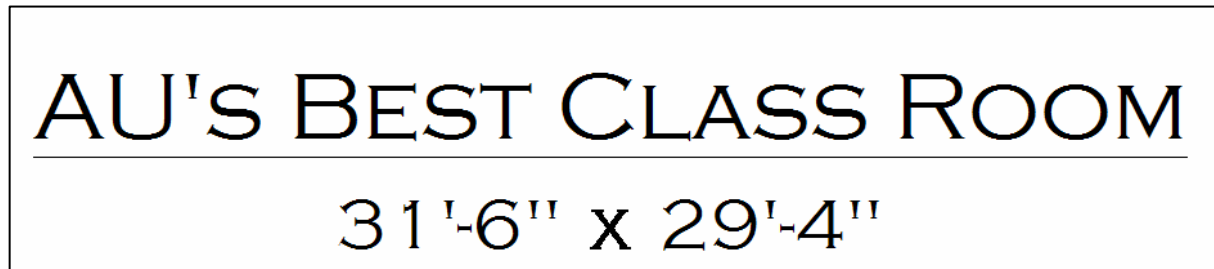


Tip #2 – Room Label LISP

How would you like a way to put a room label in a room and show its name, length and width? This routine depends on a block/drawing already having been created for the insertion during the routine. A layer is created - if it is not already there, given a preset color, and then it is set to current. The DIMSCALE is checked to give the Room Label block the size it would need for the current drawing. Once these settings are done it is time to provide the information for the Room Label block insertion.

First you must give the room a name. This routine allows for spaces to be added so you will have to press "Enter" to complete the name. Then you would pick the width of the room extreme points and after that you would pick the length extremes. There will be two dimensions added to the drawing while you do this but they will be erased prior to inputting the Room Label block. Finally you would pick the insertion point for the block.

Like all good LISP routines this routine resets the ATTDIA, CLAYER and CMDECHO variables it has changed.



For this block and LISP routine you can email me at donna.tabor-hanson@augi.com to have these emailed to you.

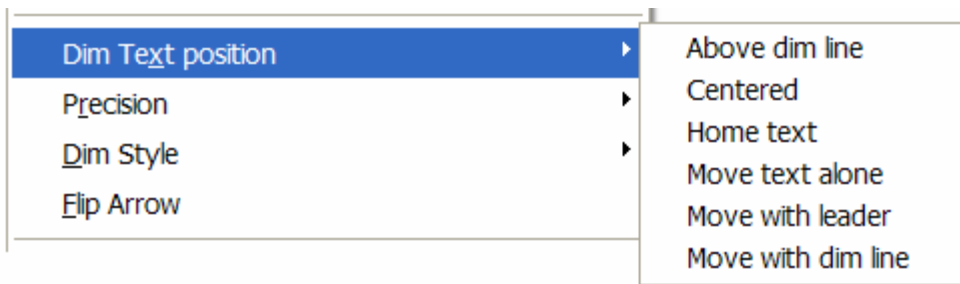
Here are a couple of tips if you copy a LISP routine. For one, have someone else proof it. Find someone that knows nothing about LISP and have them check what you have written against what you were copying. If you do the checking yourself then go from the bottom up so that you are not caught up in the programming but the proof reading.

```
(defun C:RML ()
  (setvar "CMDECHO" 0)
  (command "-LAYER" "M" "A-RTAG" "C" "2" "A-RTAG" "")
  (setq SC1 (/ (getvar "DIMSCALE") 10))
  (setq TXT1 (getstring T "\nRoom name:"))
  (setq PT1 (getpoint "\nPick first point"))
  (setq PT2 (getpoint "\nPick second point"))
  (setq DIST1 (rtos (abs (- (car PT1) (car PT2))) 4 0))
  (command "DIMLINEAR" PT1 PT2 pause)
  (setq PT3 (getpoint "\nPick first point"))
  (setq PT4 (getpoint "\nPick second point"))
  (setq DIST2 (rtos (abs (- (cadr PT3) (cadr PT4))) 4 0))
  (command "DIMLINEAR" PT3 PT4 pause)
  (command "ERASE" "L" "" "ERASE" "L" "")
  (setvar "ATTDIA" 0)
  (prompt "\nPick insertion point: ")
  (command "-INSERT" "dai_room_label" pause SC1 SC1 "" "" "" "")
  (command "-ATTEDIT" "N" "N" "" "" "" "DAIRMTXT" TXT1)
  (command "-ATTEDIT" "N" "N" "" "" "" "X10" DIST1)
  (command "-ATTEDIT" "N" "N" "" "" "" "Y10" DIST2)
  (setvar "ATTDIA" 1)
  (setvar "CLAYER" "0")
  (graphscr)
  (setvar "CMDECHO" 1)
); defun
(princ)
```

Tip #3 – DimRight!

Check out all the Right-Clicks you can do on your dimensions.

You can change text position, precision, Dim Style and how about that new, cool, Flip Arrow?



Tip #4 – Temporary ORTHO

Submitted by Rick.Bushaw

While you are in a command you may want to temporarily turn the ORTHO either ON or OFF. You can do this by just holding down the “SHIFT” key while performing the command.

Tip #5 – OFFSETGAPTYPE

Submitted by BTSIVIKIS

Here is what BTSIVIKIS says about this System Variable:

“When you offset a polyline with angle points it puts the radius in the polyline for you. I use it a lot for wetlands or Key maps to show my 200’ property owner’s list. Talk about a time saver.” (SIC)

This controls just how potential gaps between segments are treated when closed polylines are offset.

Set to 0 – Fills the gaps by extending the polyline segments.

Set to 1 – Fills the gaps with filleted arc segments. The radius of the arc segment it uses is equal to the offset distance.

Set to 2 – Fills the gaps with a chamfer. The perpendicular distance to each chamfer is equal to the offset distance.

Tip #6 – My Personal String

Submitted by Mike.Perry, London, UK

Just a little thing you can have fun with. This system variable shows up when using MTEXT. It displays what the current TEXTSTYLE settings are. Change the MTJIGSTRING System Variable to whatever you want up to 10 characters including spacing. You can use a “.” to have it display no sample text.

Tip #7 – Changing Layer Colour (sic)

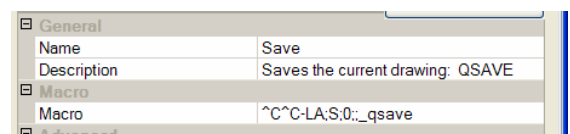
Submitted by jmelanson, Halifax, NS, Canada

Ever need to change a layer colour half way through a project? (sic)

Well jmelanson has a great idea for changing color or any other Layer property quicker. Set the Layer you want to change to the Current Layer before you open the dialog box. This may keep you from scrolling through many layers to find the one you wish to make a property change on.

Tip #8 – Always SAVE on Layer “0”

Edit the SAVE command to include setting the current Layer to “0” for this one.



Tip #9 – Exporting with WBLOCK

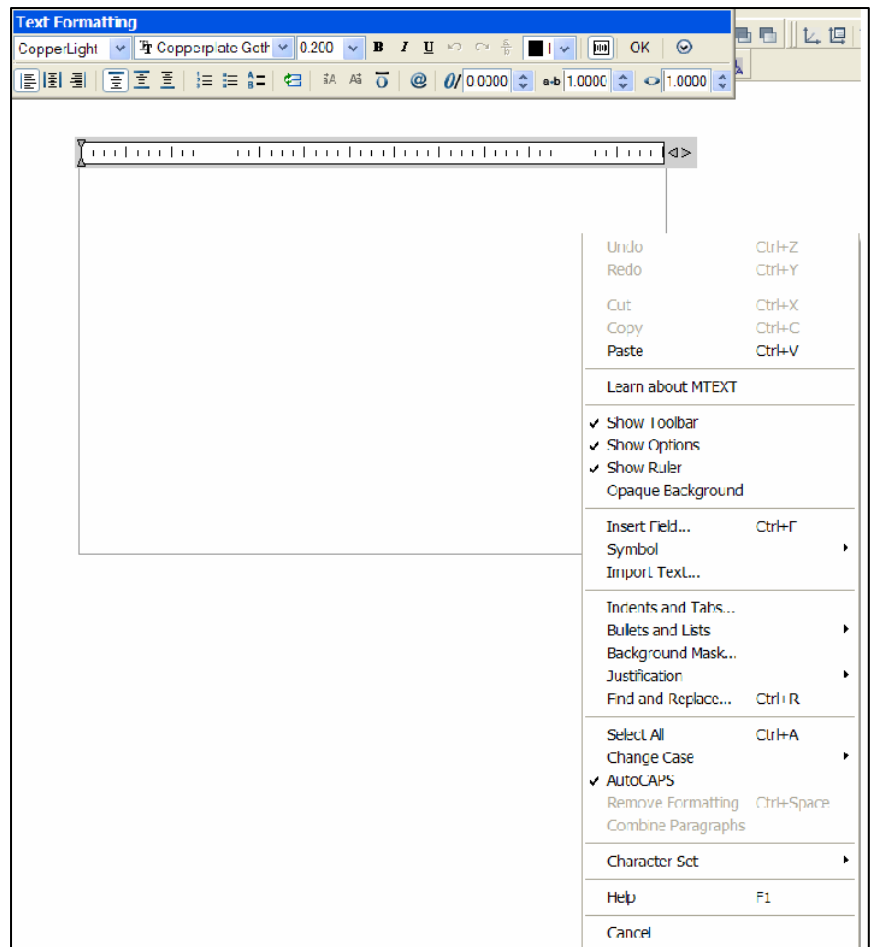
Submitted by pemin, Lyon, France

When exporting an internal block with the Wblock command, select a block instance before typing the Wblock command. This will select the block name for you in the dialog box saving you time searching through the entire list of blocks in the drawing.

Tip #10 – CAPSLOCK in MTEXT

You can make sure that your drawing text is always done in capital letters. When you have the MTEXT box open you can Right-Click in the box to bring up a menu. There you will find where you can set *AutoCAPS*. This is extremely handy for those fonts whose lower case letters are actually just a smaller version of the upper case letter. Set this in your template file (DWT) so that you don't have to think about it again.

There are a host of other menu options you will need to explore as well. Notice that you can find your Indents and Tabs, Bullets and Lists, Background Mask, Justification, and a host of other options.



The Change Case can come in handy on some fonts.

Tip #11 – Floating Viewport with a hole cut out

Submitted by Mike.Perry, London, UK

In Paperspace you can start with the outside Viewport boundary, make it a closed polyline. Next you would turn it into a region. Make the interior boundary that is the island you don't want to be visible from another closed polyline. Turn this also into a region.

Next you would subtract the island region from the outside region. Using the MVIEW command you can turn the combined regions into a Viewport.

(See this thread in the AUGI AutoCAD Tips and Tricks Forum for other credits given by Mike.Perry.)

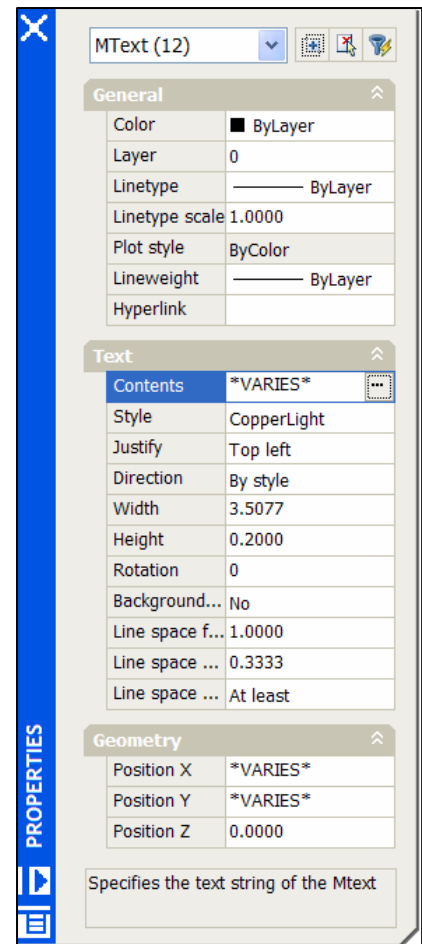
Tip #12 – Multiple MText Edits in a Row

Submitted by matt.bellenoit, Northampton

You can either pick several MTEXT objects one at a time or else you can use a Window to select the text. Either way, try selecting multiple MTEXT objects for editing.

Go to the Properties Tool Palette and you will find that the Contents shows “*VARIES*” with a box with three dots in it. If you click on the box with the dots you will be cycled through the previously selected MTEXT objects one at a time for editing.

If you pick on a blank spot in the drawing it will pass on the current selected MTEXT object and go to the next. This will cycle through all the MTEXT objects you have selected.



Tip #13 – Place a Viewport Boundary in Model Space

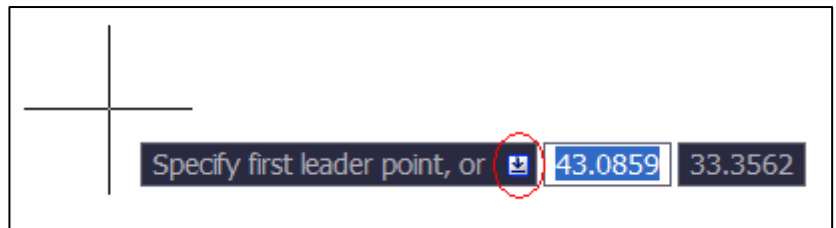
Submitted by Glenn dp, Austin TX USA

Have you ever needed to know what the viewport boundary is in model space, so you know if you were going outside what the viewport would show? Here is a simple trick to use if you have Express Tools installed on your system.

In Paperspace draw a rectangle over your Viewport. In Express Tools pull down menu, go to Layout Tools=>Change Space or type CHSPACE at the command line. Select the rectangle you have drawn and follow the rest of the prompts. You will now have a boundary in model space that matches the boundary of your viewport.

Tip #14 – That New Down Arrow Option

I noticed something new on a few commands. It has to do with having some options to a command. You will notice some commands have an “arrow” on them when there are options that can be used. To access these options just use the “Down Arrow” to bring up the list of options available.



Tip #15 – Pre-specify an Angle

Submitted by Mike.Perry, London, UK

When drawing a line at an unusual angle, you may want to see how the angle looks. After you specify the base point you can type in the "<" for the angle at which you wish to draw the line. This will lock in the segment to that angle and you are ready to specify the length. This is a polar override.

Note: This does not only work with drawing objects but it also works with editing commands such as MOVE and COPY as well.

(See this thread in the AUGI AutoCAD Tips and Tricks Forum for other credits given by Mike.Perry.)

Tip #16 – ZOOM Objects

Check out the ZOOM to Objects to get just what you want on your screen.

Tip #17 – TAB Through Commands

Submitted by Glenndp, Austin TX USA

Start typing in the first letter or two of a command. Then hit the TAB key. Every time you hit the TAB key a new command that starts with the text you typed will appear. This is great for finding a command or a system variable in which you only remember the first couple of characters.

Tip #18 – Create your own LINETYPE

Express Tools has the easiest way to create your own linetype.

Start with a clean base drawing using “Start From Scratch” instead of a template.

Draw the linetype the size it should plot.



Use MKSHAPE from Express/Tools to create the shape file. Put it in your custom path.

Put the Shape in the place of the squares found in this example.

Use MKLTYPE to create the linetype. Pick the beginning of the linetype design and then go to the next point that will repeat the pattern.

Tip #19 – Time for some CHANGE!

The CHANGE command is a very versatile command once you get to know it. It really depends on the object you select as to what you can do with it.

There are several options that apply to all objects that can be manipulated using the CHANGE command. These are all under the *Properties* option of CHANGE.

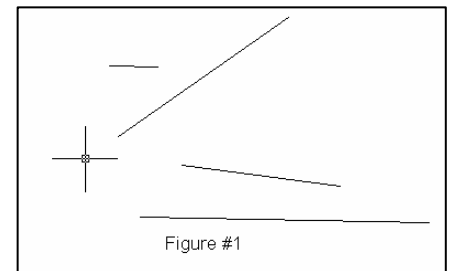
Command: CHANGE

Select objects: (do so)

Specify change point or [Properties]: P (for the properties options)

Enter property to change

[Color/Elev/LAyer/LType/ItScale/LWeight/Thickness]:

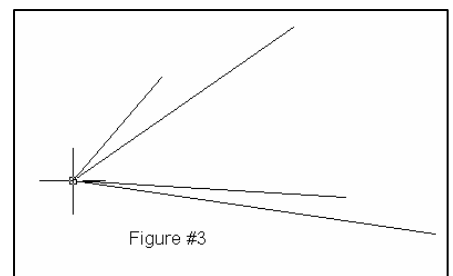
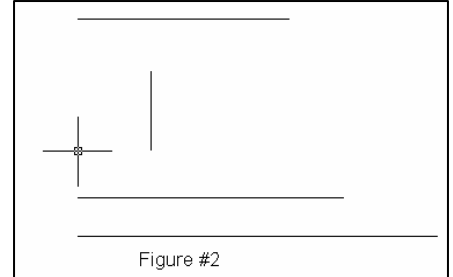


Make a selection as to the property you wish to change. Other commands that can allow this same editing option are CHPROP and PROPERTIES. CHPROP takes you straight to the *PROPERTIES* list as you see above. The *PROPERTIES* option brings up

the dialog box to allow selection from each property that can be changed in the selection set.

The real meat of this command is in the “change point” options. Dependent upon the object type you select, you may or may not have prompts from this command option.

Changing lines will allow you to change the endpoints of lines to a given pick point. If your ORTHO is on, the lines change and become perpendicular to the pick point. Be cautious, you must know which way the line will go. It could go vertical or horizontal dependent upon the other end of the line. The change happens from the other end to a point perpendicular to the pick so if the shortest distance to the pick is vertical, that becomes the direction of change. (Figures #1 & #2)



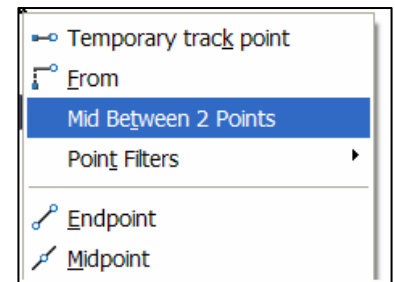
Notice how the shorter line near the top of Figure #1 went vertical while the others went horizontal in Figure #2.

The same lines in Figure #1 are shown in Figure #3 with ORTHO turned off.

Tip #20 – Meeting in the Middle

OK – imagine this, you are drawing a house and you have a window on one wall of an irregularly shaped room. You want another window on the opposite side of the room exactly facing the existing one. Would you draw a line from one side of the room, mirror the window over and then erase the line? Most of us would have done it in this way at one point in our AutoCAD career. This tip will cut out at least two of these steps.

Select your window, press enter to quit selecting objects, use shift+right click to bring up the object snap menu. Choose “Mid Between 2 Points” and pick points on your opposing walls. Bring the cursor straight out and pick your second point. Congratulations, you just saved two steps!



Tip #21 – Plot in the BACKGROUND

Set the BACKGROUNDPLOT system variable to 3 so that both plotting and publishing happen in the background allowing you to continue working on AutoCAD. Do this in your template drawing to have it always on.

Tip #22 – One per Customer please!

Since AUGI is a free membership most don't think about this – BUT – AUGI has one thing of value to our sponsors and that is our database. No sponsor ever gets our database. Things either go out through AUGI or else through a bonded mailing house. Now that you don't have to worry about your information getting out all you have to do is to keep your ONE membership up to date.

Many times AUGI members move or change email addresses. When this happens all you have to do is go to the "My AUGI" link found on the top right hand corner of the website. There you can change your email, mailing address, password, etc. anytime you wish. You can also make sure your preferences for Hot News and AUGIWorld are current.

The screenshot shows the AUGI website interface. At the top left is the AUGI logo and the date 'Sunday, November 14, 2004'. At the top right are navigation links: Home | Search | About AUGI | My AUGI | Logout | Edit. Below this is a dark blue banner with 'My AUGI' and a small icon. Underneath is a horizontal menu with links: Product Communities, Forums, Publications, Education, Exchange, LUGs, Surveys, Volunteering, Autodesk University. The main content area is divided into three columns. The left column is titled 'My AUGI' and contains links: Change Email Address, Change Password, Update Profile / Preferences, Update Mailing Address, and Terminate Membership. The middle column is titled 'My AUGI – Member Privacy Policy' and contains the text: 'AUGI is committed to protecting your privacy. We will never sell, give away, or otherwise share your personal information with anyone.' The right column contains a box titled 'Are you an expert?' with the text: 'Demonstrate your ability once and for all by becoming an Autodesk Inventor Certified Expert!' and a 'Special Offer' button. Below this is a 'Plotting Troubles?' link.

Tip #23 – My Favorite Trick

This one will be demonstrated in class only. You must be present to win – er em – make that get in on my favorite trick!

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