LISP Programs Reference Manual

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1 Contents

2 General Application

This manual is meant to provide LISP references for routine activities that allows you to automate tasks in AutoCAD.

3 LISP References

3.1 ATTRIBCOPY.LSP

Description:
This program copies text from one entity to another.

How to use:
Follow Command Line prompts and use common sense.
Type **AC** at the command line, choose text to copy,
Next either choose the text to be replaced or press
the enter button. If you press enter you can change
multiple text entities.

Required actions:
There are no requirements for using this routine.

Errors:
No known errors.

3.2 BSP.LSP

Description:
This program inserts blocks at the correct spacing to
depict Trench and Placed BSP

How to use:
Follow Command Line prompts and use common sense.
Type **BSP** at the command line.
The user will select the lower magenta line for block placement.

Requirements:
Must have **ZIG.DWG** in preference path.
Must have **CABLE** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:
If blocks are inserted upside-down user must reverse
the direction of the polyline. Polyline direction must
be from left to right. If you miss the line you will need
to start over.

3.3 BUILDING.LSP

Description:
Draws a building to Qwest CAD standards.

How to use:
Follow Command Line prompts and use common sense.

Type **BLD1** for Top building at the command line.
Type **BLD2** for Bottom building at the command line.
Type **BLDC** for a Corner building at the command line. Not working yet
User selects two points and program draws a building.
Fix the placed text when done.

Requirements:
Must have **OBJECT, TEXT,** & **GUIDELINES** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:
Hatches may need to be redone due to interfering lines
and text.
The user might have chosen points in the wrong order.

3.4 BUPDATE.LSP

Description:
This program will replace a block with a
different or new version of same block.
This will update all blocks in the current
drawing.

How to use:
Follow Command Line prompts and use common sense.
Type **BUPDATE** at the command line.
Hit enter, then select block to change. In dialog
box select new block.

Requirements:
There are no requirements for using this routine

Errors:
If you type the block name in you will get an error.
Must manually select block to replace. This program will
keep the name of the current block for new inserted blocks.
For example, if you replace all **HHH.DWG's** with **HH.DWG's** when
you list the new **HH.DWG's** it will be called **HHH.DWG**

3.5 CALLOUTS.LSP

Description:
Places block to callout the object it relates to.

How to use:
Follow Command Line prompts and use common sense.
Type **STA** at the command line for a top callout.
Type **SBA** at the command line for a bottom callout.
Type **RRSTA** at the command line for a top railroad callout.
Type **RRSBA** at the command line for a bottom railroad callout.
Pick callout point and rotation.
Then fill out the callout information.
Finally select the object you are calling out.

Requirements:
Must have **STATXT_T.DWG, STATXT_B.DWG, STA_LDR.DWG, RRSTAT.DWG,** & **RRSTAB.DWG** in preference
path.
Must have **TEXT,** & **GUIDELINES** layers created in drawing.

Proper "REP" command must be loaded and previously ran.

Errors:

No errors found yet.

3.6 CHE.LSP

Description:

Change Element - Change objects properties
to match a selected entity.

How to use:

Follow Command Line prompts and use common sense.
Type **CHE** at the command line.
Select the object or objects to modify, then
select the object with the properties you want.
A dialog box will appear with the available
properties you can change on all objects
that were selected. Dialog box will change
depending on what type of object you choose.

Requirements:

Must have **CHELEMNT.DCL** in preference path.

Errors:

If you cancel out of command your HIGHLIGHT variable
will be set to 0.

3.7 CHGALL.LSP

Description:

Changes the Color, Linetype, and layer of selected
object or objects to match different object.

How to use:

Follow Command Line prompts and use common sense.
Type **CGA** at the command line.
Select object or objects to modify, then
select object with the properties you want.

Requirements:

There are no requirements for using this routine.

Errors:

No known errors.

3.8 DETAIL_BOX.LSP

Description:

This program changes a selected rectangle
to depict a detail box.

How to use:

Follow Command Line prompts and use common sense.
Type **DETB** at the command line.

Requirements:

Must have **HIDDEN** linetype in current drawing

Errors:

No known errors.

3.9 ENTITY_SWITCH.LSP

Description:

This program switches the properties of two entities.
This switches the color, linetype, and layer of an entity.

How to use:

Follow Command Line prompts and use common sense.
Type **ES** at the command line.
Select an object, then select another object.

Requirements:

There are no requirements for using this routine.

Errors:

No known errors.

3.10 EXISTING_CONDUIT.LSP

Description:

This program changes the selected line to
depict an existing conduit.

How to use:

Follow Command Line prompts and use common sense.
Type **EC** at the command line.

Requirements:

Must have **HIDDEN** linetype in current drawing

Errors:

No known errors.

3.11 FENCE.LSP

Description:

This program inserts blocks at the correct spacing to
depict a fence line

How to use:

Follow Command Line prompts and use common sense.
Type **FEN** at the command line.
The user will select the fence line for block placement.

Requirements:

Must have **FENCE.DWG** in preference path.
Must have **FENCE** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:

If blocks are inserted upside-down user must reverse
the direction of the polyline. Polyline direction must
be from left to right. If you miss the line you will need
to start over

3.12 GL.LSP

Description:
This program draws a line from callout to
corresponding object.

How to use:
Follow Command Line prompts and use common sense.
Type **GL** at the command line.
Select INSERTION point of callout, then
select INSERTION point of corresponding object.

Requirements:
Must have **GUIDELINES** layer created in drawing.
QWEST_UTILS.LSP must be loaded and previously ran.

Errors:
No known errors.

3.13 GUARD.LSP

Description:
This program inserts blocks at the correct spacing to
depict a guardrail

How to use:
Follow Command Line prompts and use common sense.
Type **GRD-B** at the command line.
Type **GRD-T** at the command line.
The user will select the guardrail line for block placement.

Requirements:
Must have **GRD-DWN.DWG** in preference path.
Must have **GRD-TOP.DWG** in preference path.
Must have **ROAD** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:
If blocks are inserted upside-down user must reverse
the direction of the polyline. Polyline direction must
be from left to right. If you miss the line you will need
to start over.

3.14 IDB.LSP

Description:
Trims Directional Bore and inserts LABEL block with
DB for the text.

How to use:
Follow Command Line prompts and use common sense.
Type **IDB** at the command line.
Select Directional Bore line.

Requirements:
Must have **LABEL.DWG** in preference path.
Must have **CABLE** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:

```
If you receive an error that says
    " error: bad argument type: 2D/3D point: nil:"
    then zoom out and try again.
If you select the line and text comes in crooked
    make sure there are no other lines near that
    will interfere.
If you cancel out of the command, you will need to
    reset the following variables.
    UCS         PREVIOUS SETTING
    OSNAPS  PREVIOUS SETTING
    APERTURE      PREVIOUS SETTING
    PICKBOX PREVIOUS SETTING
    LAYER   PREVIOUS SETTING
    CMDECHO 1
```

3.15 LAYOFF.LSP

Description:

```
LO turns selected layer off. You can choose multiple,
but the must be chosen one at a time. The order you shut
them off is remembered. So, when you use ON they
turn back on in the order they were shut off.
```

How to use:

```
Follow Command Line prompts and use common sense.
Type LO at the command line.
Type ON at the command line.
Type LO then select an object with the layer you want shut off. Select more
if done hit enter. To turn back on Type ON they will cycle
back on.
```

Requirements:

```
There are no requirements for using this routine
```

Errors:

```
No known errors.
```

3.16 MATCH.LSP

Description:

```
This program inserts blocks at the correct spacing to
depict your baseline
```

How to use:

```
Follow Command Line prompts and use common sense.
Type ML at the command line.
The user will select the baseline for block placement.
```

Requirements:

```
Must have ML.DWG in preference path.
Must have BASELINE layer created in drawing.
Proper "REP" command must be loaded and previously ran.
```

Errors:

```
If blocks are inserted upside-down user must reverse
```

the direction of the polyline. Polyline direction must
be from left to right. If you miss the line you will need
to start over.

3.17 PJOIN.LSP

Description:
This joins Lines, Arcs, Polylines, and LwPolylines together.

How to use:
Follow Command Line prompts and use common sense.
Type **PJ** at the command line.
Select line entity that you want to join. Then select
other lines to join with the first one.

Requirements:
There are no requirements for using this routine.

Errors:
End points of lines are not exact. Solution: Grip one end point to the other.

3.18 PVC.LSP

Description:
Trims PVC on the HDPE line.

How to use:
Follow Command Line prompts and use common sense.
Type **PVC** at the command line.
Select the cable line in between the magenta lines.

Requirements:
Must have **CABLE** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:
If you receive an error that says
    " error: bad argument type: 2D/3D point: nil:"
    then zoom out and try again.
If you select the line and text comes in crooked
    make sure there are no other lines near that
    will interfere.
If you cancel out of the command, you will need to
    reset the following variables.
    UCS   PREVIOUS SETTING
    OSNAPS PREVIOUS SETTING
    APERTURE   PREVIOUS SETTING
    PICKBOX PREVIOUS SETTING
    LAYER   PREVIOUS SETTING
    CMDECHO 1

3.19 PWIDTH.LSP

Description:
This changes the width of Lines, Arcs, Polylines, and LwPolylines.

How to use:

Follow Command Line prompts and use common sense.
Type **PW** at the command line.
Select line entity that you want to change the width of, then enter
your width.

Requirements:

There are no requirements for using this routine.

Errors:

No known errors.

3.20 RB.LSP

Description:

This program draws a centerline and places the
break line and text for a perpendicular road of sidewalk.

How to use:

Follow Command Line prompts and use common sense.
Type **RB** at the command line.
Type **SB** at the command line.
Pick left road line, then right road line.
If you want test pick a point for it and type
the name of the road.
If you choose not to place text hit enter
twice and it will finish the program

Requirements:

Must have **BREAK.DWG** in preference path.
Must have **ROAD** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:

If road is not properly drawn then reselect the lines.

3.21 RL.LSP

Description:

This program rotates a leader to match its
corresponding guildline

How to use:

Follow Command Line prompts and use common sense.
Type **RL** at the command line.
Select Leader then select corresponding guideline.

Requirements:

There are no requirements for using this routine.

Errors:

No known errors.

3.22 ROAD.LSP

Description:

This program drafts a road. Including centerline,
break line, and text.

How to use:
Follow Command Line prompts and use common sense.
Type **RTOP** at the command line.
Type **RBTM** at the command line.
When drafting a drawing from scratch a **VEE** block
is placed at the Begin and End station of a road.
The user will select the left/top **VEE** then
select the right/bottom **VEE** and the program will
draw two lines from those points and place text,
centerline, and a break line. Make sure your UCS is set
to WORLD prior to running program.

Requirements:
Must have **BREAK.DWG** in preference path.
Must have **ROAD** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:
No known errors.

3.23 SLOPE.LSP

Description:
This program inserts blocks at the correct spacing for
a slope line to be depicted.

How to use:
Follow Command Line prompts and use common sense.
Type **TOP-DWN** at the command line.
Type **TOP** at the command line.
Type **TOE-UP** at the command line.
Type **TOE** at the command line.
The user will select the line they want to depict as the slope.

Requirements:
Must have **TOP-DWN.DWG, TOP.DWG, TOE-UP.DWG, TOE.DWG** & in preference path.
Must have **SLOPE** layer created in drawing.
Proper "REP" command must be loaded and previously ran.

Errors:
If blocks are inserted upside-down user must reverse
the direction of the polyline. Polyline direction must
be from left to right. If you miss the line you will need
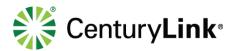to start over.

3.24 TE.LSP

Description:
Text Edit - Edits Text, Mtext, Attributes, Attdefs and Dimensions.
Multiple Text Edit - Edits text entities in order of selection.

How to use:
Follow Command Line prompts and use common sense.
Type **TE** at the command line.
Type **MTE** at the command line.

Requirements:

There are no requirements for using this routine

Errors:

No known errors.

3.25 TERMINATE.LSP

Description:

This program inserts an **AHD** block to
represent a terminating line.

How to use:

Follow Command Line prompts and use common sense.
Type **TER** at the command line.
Pick END point of line to terminate.
Pick NEArest point on line to terminate.

Requirements:

Must have **AHD.DWG** in preference path.
Proper "REP" command must be loaded and previously ran.

Errors:

No known errors.

4 References

Reference	Link	Description
AutoCAD Setup Instructions Manual	https://portals.level3.com/sites/GFS/DocumentStore/AutoCAD%20Setup%20Instructions%20Manual.docx	Installation instructions of CTL AC blocks, Lisp, net application, plot and line styles
Detail Drawing Standards Manual	https://portals.level3.com/sites/GFS/DocumentStore/Detail%20Drawing%20Standards%20Manual.docx	Design Standards

5 Version History

The latest version of this document can be found at:
https://portals.level3.com/sites/GFS/DocumentStore/LISP%20Programs%20Reference%20Manual.docx

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Version	Date Published	Business Process Owner (Region)	Document Writer	Summary of Changes
1.0	8/30/2018	Tim Fullenkamp	Bill Chandler	First publication