

AutoPlot Tools for Spotlight

© Samuel L. Jones, June 2002

Revised April 2025

For help, contact Sam at sjones@autoplotvw.com, (310) 993-4172

DOCUMENTATION QUALITY AND MY PHONE #.....	6
LABEL LEGEND SYMBOLS	6
AUTO PLOT TOOLS FOR SPOTLIGHT COMMANDS.....	8
REGISTRATION AND SUPPORT	8
SELECT FIXTURES AND ACCESSORIES	9
SELECT BY FIELD(S) VALUES(S)	9
SELECT BY POSITION EXAMPLE	10
SELECT ALL BY POSIT VALUE	10
SELECT BY TYPE EXAMPLE	10
SELECT BY UNIVERSE EXAMPLE	10
SELECT SPECIAL.....	10
SELECT BY CHANNEL RANGES.....	10
SELECT BY PURPOSE EXAMPLE.....	10
SELECT BY DIMMER RANGES	10
SELECT BY ACCESSORY EXAMPLE	11
SELECT BY CIRC NAME EXAMPLE	11
SELECT BY LEGEND & ROTATION	11
SELECT BY SYMBOL NAME	11
SELECT BY CLASS EXAMPLE	11
CIRCLE SELECTED OBJECTS	11
DELETE SELECTION CIRCLES	11
SHOW AND LIST SELECTED OBJECTS	11
DESELECT EVERYTHING.....	11
DESELECT INSIDE GROUPS.....	12
ALD COMMANDS.....	12
MARK WORKING ON.....	12
MARK AS DONE.....	12
MARK SELECTED AS DONE	12
DELETE ALD MARKS	12
ALIGN FIXTURES.....	12
ALIGN LIGHTS TO POSITION-H.....	12
ALIGN LIGHTS TO POSITION-V	13
ALIGN LIGHTS TO CLICK-H.....	13
ALIGN LIGHTS TO CLICK-V	13
DISTRIBUTION.....	14
DISTRIB OBJECTS ALONG LINE.....	14
DISTRIBUTE BY SPACE BETWEEN	14
MIRROR ACROSS CENTERLINE.....	14
MOVE OBJS TO CIRCUMFERENCE	15
MOVE OBJECTS TO PATH	15
TRADE PLACES	15
TRADE PLACES WITH DIALOG	15

SPACE	16
SPACE HORIZ FROM CENTER	16
SPACE HORIZ FROM LEFT	16
SPACE HORIZ FROM RIGHT.....	16
SPACE HORIZ IN OPENING	16
SPACE VERTICAL FROM BOTTOM	16
SPACE VERTICAL FROM TOP	16
ROTATE OBJECTS	17
ROTATE EACH LEFT 45 DEG	17
ROTATE EACH LEFT 90 DEG	17
ROTATE EACH RIGHT 45 DEG.....	17
ROTATE EACH RIGHT 90 DEG.....	17
ROTATE EACH OBJ 180 DEG.....	17
ROTATE EACH OBJ BY QUERY	17
FLIP EACH OBJECT HORIZ	17
FLIP EACH OBJECT VERTICALLY	17
DIMENSIONING	18
DIMENSION ALONG VECTOR (WAS "HANGING TAPE").....	18
DIMENSION ALL ALONG VECTOR (WAS HANGING TAPE ALL)	18
MAKE TRUSS TAPE	18
TRUSS TAPE FOR CIRCULAR SEL	18
DIM FROM CENTER LINE.....	19
DIM FROM CENTER (KENNY)	19
CENTER LINES.....	19
CREATE CENTER LINE	19
DIM FROM TOP OR BOTTOM.....	19
DIM CIRCULAR SELECTION	19
DIM BETWEEN LIGHTS	19
DIM BETWEEN LIGHTS INCL CTR	20
DIM BETWEEN LIGHTS WO 18.....	20
PUT DIMENSION IN USER FIELD.....	20
ADJUST FROM CENTER LINE (H)	20
ADJUST FROM CLICK (H)	20
ADJUST FROM CLICK (V).....	20
ENTER DATA.....	21
ENTER DATA FOR SELECTED	21
APPLY TO ALL	21
ASSIGN ADDRESSES (DMX).....	21
UNIVERSES, DIMMERS, AND DMX.....	22
ASSIGN CHANNELS	23
MAKE CUSTOM FIXTURE WKS	23
COPY FIELD TO FIELD	23
COPY DIMMER BREAKER	23
FIND REPLACE FIELD VALUE	24
PREFIX - SUFFIX MANAGEMENT.....	24
PICK AND ASSIGN SHORT NAME.....	25
PICK AND ASSIGN USER MODE	25
EDIT USER TYPE MODE LIST	26
SAVE USER TYPE MODE THE LIST.....	26
ACCESSORIES & DEVICES.....	26
PLACE DEVICES AND ACCS.....	26
SELECT BY ACCESSORY EXAMPLE	27
DELETE ALL ACCS FROM SELECT	27

DELETE CHOSEN ACCESSORIES	27
COLLECT & TOTAL ACCESSORIES	28
LABEL LEGENDS	28
IMPORT LABEL LEGENDS	28
SHOW ALL FIELD LABELS.....	28
HIDE ALL LABEL FIELDS.....	28
HIDE LABELS EXCEPT UNIT NUM	28
COPY ALTERED LABEL LEGENDS	28
CHANGE LL FIELD ASSIGNMENTS	28
CHANGE LL TEXT APPEARANCE.....	29
SET LL FIELD ROTATIONS	29
SWAP LEGEND FIELD PLACES	29
TRUSS TAGS.....	29
PLACE VLM TRUSS TAGS.....	29
REFRESH ALL TRUSS TAGS.....	29
SELECT TRUSS TAG BY SYMBOL.....	29
MOVE LABEL TO TRUSS HEIGHT.....	29
RESET TRUSS TAG POINTERS.....	29
ALIGN SEL TAG ARROWS X COOR	29
ALIGN SEL TAG ARROWS Y COOR ZZ	29
PRINTING LABELS	30
PRINT LABELS	30
PRINT LABELS FROM WORKSHEET	30
CREATING DATA FOR PRINTING LABELS	30
MAKE DIMMER BREAKER WKS	30
MAKE MULTI PART LABEL WKS	30
COLLECT & TOTAL WEIGHT	30
ADD RECORD W WEIGHT FIELD.....	31
LINE SETS FROM WORKSHEETS.....	31
THE LIST.....	31
LINE SET SCHEDULE FROM LIST.....	31
LINE SET SCHEDULE (SIMPLE).....	32
LINE SETS FROM LIST	32
FOCUS POINTS.....	32
MAKE FOCUS PTS FROM TEXT	32
MAKE FOCUS POINT GRID	32
SHOW FOCUS PTS.	33
HIDE ALL FOCUS POINTS.....	33
BEAMS	33
BEAM SECTION (SIMPLE)	33
BEAM CONSOLE	33
ALL BEAMS ON.....	33
ALL BEAMS OFF	33
SYMBOL EDITING	34
CHANGE SYMBOL LINE WEIGHT	34
CREATE LIGHT POSITION	34
CREATE PIPE SYMBOL	35
DRAW ALL SYMBOL RESOURCES.....	35
CLASS & LAYER HELP	35

WRITE LAYERS TO FILE.....	35
GET LAYERS FROM FILE.....	35
WRITE CLASSES TO FILE	35
GET CLASSES FROM FILE.....	35
SHOW SELECTED CLASSES	36
SHOW SELECTED CLASS + NONE	36
HIDE SELECTED CLASSES	36
HIDE UNSELECTED CLASSES	36
TRUCK PACK PLANNING.....	36
TRUCK PACKING SMART OBJECTS	36
TRUCK TRAILER OUTLINE	36
TRUCK BOX	36
TRUCK LOAD BAR	37
TRUCK STRAP	37
TRUCK PACKING MENU COMMANDS	37
CREATE BOXES FROM FILE.....	37
CREATE BOXES FROM WORKSHEET.....	38
CREATE BOXES FROM INVENTORY	38
SELECT BOXES BY FIELD VALUE	38
SHOW TOTAL WT OF SELECTED.....	38
SORT BOXES	38
TOGGLE COMMANDS.....	39
TOGGLE SIMPLIFIED TRUSS.....	39
TOGGLE ADJUST FLIPPED TEXT	39
TOGGLE ALL FOCUS POINTS	39
TOGGLE AUTO POSITIONING.....	39
TOGGLE GRAY OTHERS EDITING	39
TOGGLE LAYER COLORS	39
TOGGLE SHOW OTHERS EDITING.....	39
AP WORKSHEETS	40
MAKE CUSTOM FIXTURE WKS	40
EDIT TRUSS TAPE ASSIGN WKS.....	40
SAVE TRUSS TAPE ASSIGN WKS.....	40
EDIT SHORT INST NAME LIST	41
SAVE SHORT INST NAME LIST	41
OPEN ALL WORKSHEETS	41
TILE WORKSHEETS	41
SORT WORKSHEET CELLS.....	42
SORT WORKSHEET CELLS.....	42
CLOSE ALL VISIBLE WORKSHEETS.....	42
CLEAR TOP DATABASE SORT	42
MISCELLANEOUS.....	42
MARK AND RESET USER ORIGIN	42
MOVE MESSAGE WINDOW	42
LINE FROM SEL OBJS TO CLICK.....	42
LIST RECORDS AND FIELDS	42
HYPERLINK SHEET INDEX	42
BORDER SELECTED OBJECTS	43
OBJECT CONTEXT MENU COMMANDS (RIGHT CLICK ON AN OBJECT)	43
ALD COMMANDS.....	43
MARK WORKING ON	43
MARK AS DONE.....	43

Documentation Quality and my phone #

While I have enjoyed creating AutoPlot, and using it in my day to day work at UCLA, I find creating the documentation required to share this work to be tedious in the extreme. The necessity of creating that documentation does not go away. Should you find this documentation wanting please feel to contact me in any manner to help with your questions. My cell phone is (310) 993-4172. Hopefully, if you are stuck in a hotel room at midnight, you are in New York, not Anchorage, but the appropriate hours to call are the hours appropriate to the urgency of your need. Any overseas users, if you're desperate enough to spend the money, I'll answer the phone. My Skype ID is AutoPlotVW. I can always be reached by email at sjones@autoplotvw.com. Sometimes I am backpacking, and I am totally out of reach. This usually happens during the last week of August and the month of September. During that time, you can always try. I usually try to catch up between trips.

Label Legend Symbols

The concept of Label Legends is one of the powerful and exciting aspects of Spotlight. In its current implementation, it is also one of the most frustrating and obtuse. First, because text will rotate when the fixture is rotated, you are faced with two options. One, you can go to every fixture that faces sideways on a light pipe and drag the text to the appropriate position, usually below the fixture symbol, or two, you can create a set of labels for each of your commonly used fixture facings on the plot. I have found the latter choice to be the preferable way to manage labels. Creating label legends for any given rotation other than straight up can be very irritating, because the Label Legend Manager makes it very difficult to see and judge exactly where text will end up and how it will align when placed anywhere but below the fixture graphic. In addition, it turns out that flipping lighting device objects horizontally or vertically will not always yield the expected text placement, and as a result, even more label legends are required. I have found that I need legends for the following fixture facings:

Up
sideways left
sideways right
diagonal left
diagonal right
fixtures on booms facing left
fixtures on booms facing right.

Flipping fixtures with these labels handles the vast majority of my needs.

Now, there is the question of what should be put in a legend. This is a very contentious issue among those of us who use VectorWorks and is ultimately resolved by everyone making their own label symbols

AutoPlot Tools for Spotlight provides a set of predefined Label Legends, one set with containers and

one without

With Containers:

- { Boom <
- { Boom >
- { Diag /
- { Diag \
- { Pipe Side <
- { Pipe Side >
- { Up Screen
- { Up Screen nr

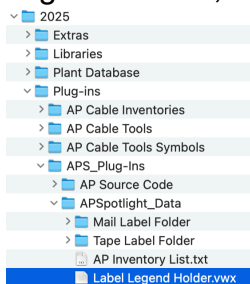
Without Containers:

- Boom <
- Boom >
- Diag /
- Diag \
- Pipe Side <
- Pipe Side >
- Up Screen
- Up Screen nr

All of these label legends contain and display the following fields:

- Unit Number
- Color
- Channel
- Address
- User Field 1

If you wish to display different fields you can use the "Change LL Field Assignments" command (see Label Legends in the table of contents), or you can use the Label Legend editor to add or delete fields. All the provided label legends are contained in the VectorWorks drawing document, "Label Legend Holder," that is in the "2025" user folder



AutoPlot Tools for Spotlight Commands

AutoPlot	Cable Tools	Window	Clou
Registration and Support			
Select by Field(s) Value(s)	⌘ ⇧ ⌘ S		
Select By Position Example	⌘ ⌘ S		
Select All By Posit Value			
Select By Type Example	⌘ ⌘ T		
Select By Universe Example			
Select Special			>
Circle Selected Objects			
Delete Selection Circles			
Show and List Selected Objs			
DeSelect Everything			
DeSelect Inside Groups			
ALD Commands			>
Align Fixtures			>
Distribute Fixtures			>
Space Fixtures			>
Rotate Objects			>
Dimensioning			>
Enter Data			>
Accessories & Devices			>
Label Legends			>
AP Instrument Summary			
Truss Tags			>
Printing Labels			>
Collect & Total Weight			
Add Record w Weight			
Line Sets			>
Focus Points			>
Beams			>
Symbol Editing			>
Class & Layer Help			>
Truck Pack Planning			>
Toggle Commands			>
AP WORKSHEETS			>
Miscellaneous			>

Registration and Support

After 21 days, an alert will appear asking you to register your AutoPlot Tools for Spotlight. After dismissing this alert the macros will work normally. After 60 days the numbering and export/import commands will be disabled and an alert will appear asking you to register.

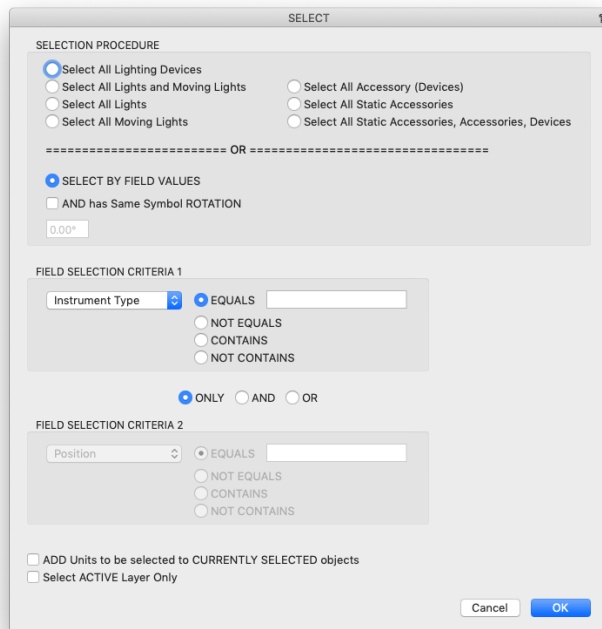
It is now possible to register online. Go to the web site <http://www.autoplotvw.com> to see if on line registration has been enabled. If you have registered earlier versions of AutoPlot VW and do not have a registration number, send an email to me, Sam Jones, at sjones@autoplotvw.com.

Select Fixtures and Accessories

I have often found that I would like to be able to select one fixture and then select all the other fixtures that share the same value in one or more criteria.

Select By Field(s) Values(s)

This replaces the multitude of selection commands in previous versions of the AutoPlot Tools. It will put up the dialog below.



If any of the "Select All...." Buttons are pressed the rest of the controls below the "SELECT BY FIELD VALUES" button will be disabled. To enable the field value controls the "SELECT BY FIELD VALUES" button needs to be selected.

When the dialog box is presented the text edit boxes on the right will have values that represent the values of the first selected object on the active layer *if* that object is a lighting device. The drop down menus on the left will be remembered from the last time the command was used. Pay attention to the "ONLY", "AND" and "OR" buttons as they will have a dramatic effect on the resulting selection. If only one criteria is desired for selection be sure the "ONLY" button is selected.

The "CONTAINS" buttons allow you to select partial values in a field. For example, you can select all the fixtures that contain "Front" in the Purpose field. This would include fixtures with the following values "Front SL", "Front CS", "Front SR". The "NOT EQUAL" and "NOT CONTAINS" buttons will exclude Lighting Devices from the selection based on the field selected and value entered

The "NOT CONTAINS" buttons will allow you to exclude Lighting devices from the selection in the same way they are included in the paragraph above.

Select By Position Example

This command will select all the Lighting Devices that share the same value in the “Position” field as the value in the fixture that is already selected.

Select All By Posit Value

This command will select all objects that have a record, any record, containing a field named “Position” that shares the same value in that “Position” field as the value in the “Position” field of the fixture that is already selected. A Lighting Device object must be selected. So, if you select a Lighting Device that has the value “Truss 1” in the position field and then select this command, all the the objects that have a record, any record, with a field called “Position” and the value in that “Position” field is the same as the value in the selected Lighting Device will be selected.

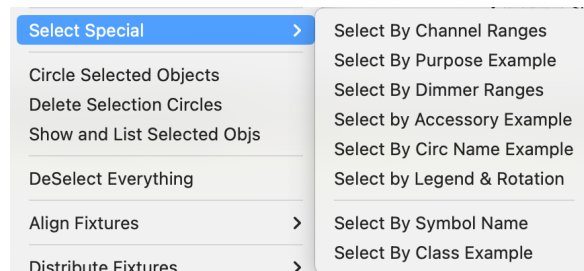
Select By Type Example

This command will select all the Lighting Devices that share the same value in the “Instrument Type” field as the value in the fixture that is already selected.

Select By Universe Example

This command will select all the Lighting Devices that share the same value in the “Universe” field as the value in the fixture that is already selected.

SELECT SPECIAL



Select By Channel Ranges

Selects all fixtures within a user specified channel range or ranges inclusive. An example range of channels would be "1,3,5,11-16"

Select By Purpose Example

Selects all fixtures that have the same Circuit Name assigned to them as the currently selected fixture.

Select By Dimmer Ranges

Selects all fixtures within a user specified dimmer range or ranges inclusive. An example range of dimmers would be "1,3,5,11-16". Remember this does reference the “Address” field.

Select By Accessory Example

This command will present a dialog for you to pick an accessory. Only accessories currently in the drawing will be in the list. After you pick an accessory and dismiss the dialog, All of the fixtures that have the selected accessory will be selected

Select By Circ Name Example

Selects all fixtures that have the same Circuit Name assigned to them as the currently selected fixture.

Select By Legend & Rotation

Selects all fixtures that have the same Rotation and Legend assigned to them as the currently selected fixture. A dialog box will be presented that will allow you to include rotations that are the 180 degree reciprocal of the selected fixture.

Select by Symbol Name

This command will select all the Lighting Devices that share the same value in the "Symbol Name" field as the value in the fixture that is already selected.

Select by Class Example

This command will select all the Lighting Devices that assigned to the same Class.

Circle Selected Objects

There are occasions when you will want to remember or mark all the objects in a selected group, so that you can work on each individual of that group. This macro will circle the currently selected objects. (See Delete Selection Circles below.)

Delete Selection Circles

This macro deletes the circles placed around selected objects by the macro described above.

Show and List Selected Objects

This command will create a worksheet that displays the following for every selected object.

Type

Type Name

Layer

Depth

X Coor

Y Coor

It can make finding objects much easier.

DeSelect Everything

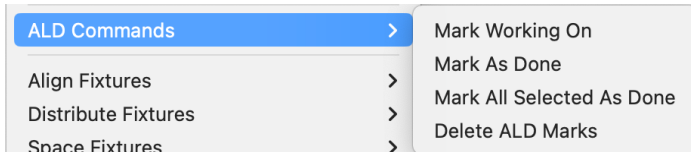
Does what it says even hidden selected objects that would not normally be deselected when you click on nothing

DeSelect Inside Groups

Without deselecting any selected groups, and without ungrouping any groups, this command will deselect all objects that are inside any group in the drawing. When you create a group from selected objects, those objects remain selected, but there is no indication of that status

ALD Commands

When I returned to the Assistant LD position for a friend, I found myself having to call channels for focus. After spending the afternoon wrestling with an E size print out of the plot and some highlighters, went home and made the following commands, so I could call channels and have multiple people working while scrolling on my laptop



Mark Working ON

This places a red rectangle around any Lighting Device that you click on.

Mark As Done

This will remove the red rectangle and place a green X on any Lighting Device you click on

Mark Selected As Done

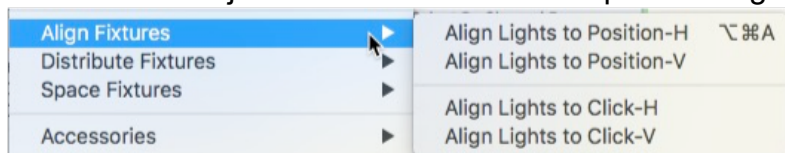
This will remove the red rectangle and place a green X on all selected Lighting Devices.

Delete ALD Marks

This will remove all red rectangles and green Xs on placed with tht commands above.

Align Fixtures

The functionality provided by these macros is already available to the SL user with the Distribute Tool. However, when I only wanted to align selected fixtures, I *hated* having to select “Align only” and draw the line. I just wanted to click on the point to align to



Align Lights to Position-H

- 1) Select a lighting position you want to align to OR a Lighting Device object
- 2) Run Macro
 - a) The macro will align all the lights that share that position to the Y coordinate of the position object. .

Align Lights to Position-V

- 1) Select a lighting position you want to align to OR a Lighting Device object
- 2) Run Macro
 - b) The macro will align all the lights that share that position to the X coordinate of the position object. .

Align Lights to Click-H

- 1) Select the symbols you want to align
- 2) Run Macro
 - a) Click on the point to align to; fixtures will move up and/or down the screen (change the Y coordinate) to align with the click. The X coordinate will not change. Useful for normal lighting battens.

Align Lights to Click-V

- 1) Select the symbols you want to align
- 2) Run Macro
 - c) Click on the point to align to; fixtures will move left and or right on the screen (change the X coordinate) to align with the click. The Y coordinate will not change. Useful for Booms or systems to be aligned on different battens.
 - d)

DISTRIBUTION

Distrib Objects Along Line

- 1) Select the symbols you want to distribute
- 2) Run Macro
 - a) Make the appropriate selections in the dialog below. Your responses will be remembered.

The dialog box is titled "Distribute Selected Objects Along a Line". It contains three main sections:

- Mode of Distribution:** Three radio buttons are present. "By specified distance" is selected. Below it, two text boxes are filled with "2'0\"".
- Criteria for Distribution:** Three radio buttons are present. "Maintain Vertical Y Value Order from Start of Line" is selected. Below it, a line of text states: "The object with **the lowest Y value** coordinate will be put at **the start** of the line".
- Rotate Objects:** A checked checkbox labeled "Rotate Objects Perpendicular to the line."

At the bottom, there is a help line "For Help, press F1 or click the ? icon." and two buttons: "Cancel" and "OK".

- b) Draw a line. The start of the line will be where the object with the lowest X coordinate, or the lowest Y coordinate, or the lowest Lighting Device Unit Number will be placed. The direction that the line is drawn will affect the perceived order of the objects. The command can be used on all objects.

Distribute By Space Between

The dialog box is titled "Space Selected Objects". It contains two main sections:

- Space Objects by distance between the objects:** Four radio buttons are present. "From Top Most Object" is selected.
- Space between objects:** A text box is filled with "1\"".

At the bottom, there is a help line "For Help, press F1 or click the ? icon." and two buttons: "Cancel" and "OK".

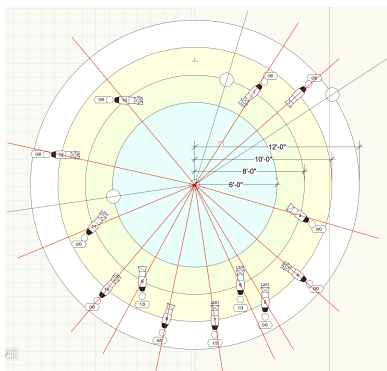
This command will place the user specified distance between the bounding box of each selected object.

Mirror Across Centerline

This macro does what it says. It requires that there be a screen vertical line with one of the following names: "Centerline", "Center Line", or "CL". For now this command will not work with horizontal center lines.

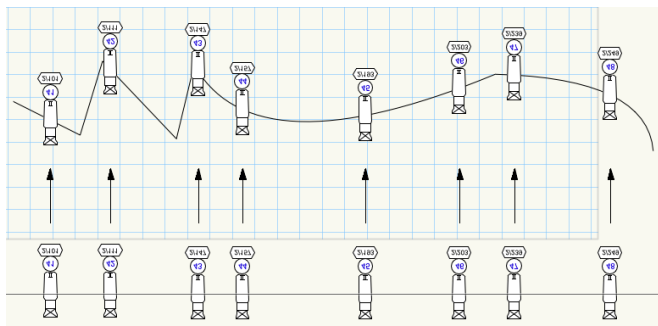
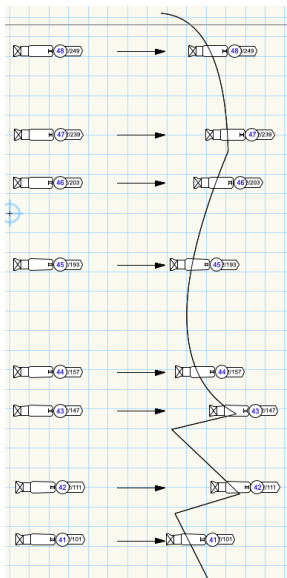
Move Objs to Circumference

This macro asks for the diameter of a circle (does not have to be drawn) and then asks for a click on the center of that circle. It then moves all the selected objects to that circle along a line from the center of the circle through their starting position.



Move Objects to Path

This macro will move all the selected fixtures so that their insertion points are on a selected path without changing their X coordinate values. If the difference between the highest and lowest Y coordinate values of the fixtures exceeds the difference between the highest and lowest X coordinate values. The objects will be moved to the path preserving their Y coordinates instead of their X coordinates.



Trade Places

This macro will take 2 selected objects and have them switch places. If the objects are Spotlight lighting fixtures that have the "Lighting Device" record they will trade Unit Number values and trade Position values. They will **not** trade their rotations or other field values.

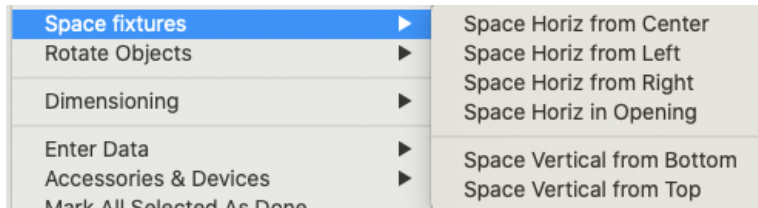
Trade Places with Dialog

This macro works just like the "Trade Places" macro above except a dialog will come up where you can specify which field values get traded between the 2 selected lights and which ones stay with the original.

SPACE

Macros 27 through 30 will maintain the Y coordinate of every fixture and will move the selected fixtures horizontally maintaining their vertical screen positions. Macros 31 and 32 maintain the X coordinate of every selected fixture and move them vertically on the screen. Only one macro, #27 “Space Horiz from Center”, provides functionality not provided by SL. These macros are very similar to the SL “Align and Distribute Items” tool. These macros behave like the APSL distribute commands in that they only move lighting fixtures and ignore other selections, and they only require one click to obtain the alignment point.

All spacing commands do not require a line to be drawn, just a click to measure from



Space Horiz from Center.

This command will evenly space fixtures on both sides of a prompted mouse click using a prompted distance. The distance is remembered. All spacing commands do not require a line to be drawn, just a click to measure from.

Space Horiz from Left

This command will evenly space fixtures from screen left to screen right from a prompted mouse click using a prompted distance. The distance is remembered. All spacing commands do not require a line to be drawn, just a click to measure from.

Space Horiz from Right

This command will evenly space fixtures from screen right to screen left from a prompted mouse click using a prompted distance. The distance is remembered. All spacing commands do not require a line to be drawn, just a click to measure from.

Space Horiz in Opening

This command works just like the “Distrib Syms in Spaces” except that none of the Y coordinates are changed. For example, you could draw a line from one side of the proscenium wall to the other and the macro would space the selected fixtures on the FOH position without moving them away from that position.

Space Vertical from Bottom

This command will evenly space fixtures from screen bottom to screen top from a prompted mouse click using a prompted distance. The distance is remembered. All spacing commands do not require a line to be drawn, just a click to measure from.

Space Vertical from Top

This command will evenly space fixtures from screen top to screen bottom from a prompted mouse click using a prompted distance. The distance is remembered. All spacing commands do not require a line to be drawn, just a click to measure from.

Rotate Objects

Rotate Objects	>	Rotate Each Left 45 deg
		Rotate Each Left 90 deg
Dimensioning	>	Rotate Each Right 45 deg
Enter Data	>	Rotate Each Right 90 deg
Accessories & Devices	>	
Label Legends	>	Rotate Each Obj 180 deg
AP Instrument Summary		Rotate Each Obj by Query
Truss Tags	>	Flip Each Object Horiz
Printing Labels	>	Flip Each Object Vertically

Rotate Each Left 45 deg

This macro will rotate each selected object 45 degrees to the left, individually. This is different from the normal VW rotate command that would rotate all the selected objects as a group.

Rotate Each Left 90 deg

This macro will rotate each selected object 90 degrees to the left, individually. This is different from the normal VW rotate command that would rotate all the selected objects as a group.

Rotate Each Right 45 deg

This macro will rotate each selected object 45 degrees to the right, individually. This is different from the normal VW rotate command that would rotate all the selected objects as a group.

Rotate Each Right 90 deg

This macro will rotate each selected object 90 degrees to the right, individually. This is different from the normal VW rotate command that would rotate all the selected objects as a group.

Rotate Each Obj 180 deg

This macro will rotate each selected object 90 degrees to the right, individually. This is different from the normal VW rotate command that would rotate all the selected objects as a group.

Rotate Each Obj by Query

This macro will rotate each selected object a set number of degrees, selected by the user, individually. This is different from the normal VW rotate command that would rotate all the selected objects as a group.

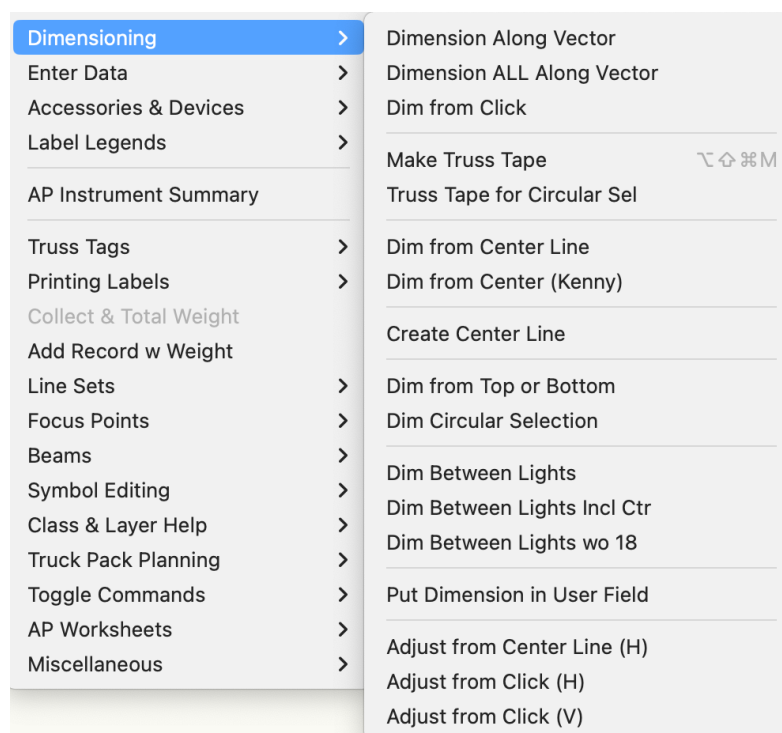
Flip Each Object Horiz

Flip Each Object Vertically

A handy feature in VectorWorks is that you can select multiple objects and then flip that set of objects with the Flip Horizontal and the Flip Vertical commands. When you use the standard Vectorworks commands the object on the right will go to the left or the object that was on the top will go to the bottom, respectively. This is often ***not*** what you wished. Many times you would like to select a group of objects and then flip each one, individually in place. This is particularly handy when you have mirrored or flipped fixtures horizontally. *These two commands will flip each selected object individually, in place, not as a group.*

DIMENSIONING

All the dimension macros use the default text of the document, but the dimensions are fully editable and may be changed later if desired.



Dimension Along Vector (was “Hanging Tape”)

This macro replaces the "Dim from Click" and "Dim from Top or Bottom" from earlier versions. This macro will dimension from the start of a user supplied line to the selected fixtures. You will be prompted in a message box to draw a line from where you want to measure. The line drawn needs to be parallel to position you want to measure. For example, you would draw a line along the pipe you are measuring, or along the chord of a truss you are dimensioning, or even down the middle of a truss parallel to the two chords. You will then be prompted to click where you want the dimension text to be. Only Lighting Devices will be dimensioned.

Dimension ALL Along Vector (was Hanging Tape ALL)

This command works exactly the same as the command above except that it will dimension every object that is selected, not just Lighting] Devices.

Make Truss Tape

Truss Tape for Circular Sel

These commands are explained in 3 other documents in the folder “Truss Tapes” that came with the download

1. Make Truss Tape Command Doc.pdf
2. Customizing AP Truss Tapes.pdf
3. Truss Tapes Printer Setup.pdf

Dim From Center Line

This macro will dimension all the selected lights from the centerline. There must be an object called Center Line in the drawing. (See the “Move To Closest Unit (H)” and “Move To Closest Unit Ctr” for additional functionality)

Dim From Center (Kenny)

This macro will dimension all the selected lights from the centerline, just like the macro above. However, Kenny Schutz ended up changing the alignment of the text which really helped with crowded plots. He asked me if I could automate the dimensioning he liked.

Center Lines

The center lines used by the commands above and the “Adjust...” commands below look for a center line in the document. A center line is defined as an object that has one of the following in the name field at the bottom of the OIP.

“Center Line”

“center line”

“CenterLine”

“centerline”

“CL”

“Ctr Line”

The “Make Truss Tape” command will recognize any object that has a “Doc Ctr Record” attached to it, and will mark its location. The “Create Center Line” command will attach that record to the center line it creates.

Create Center Line

This command will create a line object at a user click up and down screen and name it “Center Line”

Dim from Top or Bottom

This macro will create a set of orthogonally vertical dimensions for selected Lighting Devices. The first requested click is where to measure from the next click is where the dimension text will be placed. Usually, this is an unsatisfactory command for fixtures on a diagonal line. For those fixtures, you will want to use the Dimension Along Vector command.

Dim Circular Selection

This macro will dimension between selected fixtures that are located on an arc of the same radius. Nasty errors will occur if fixtures are on different radii. This means that you must select fixtures on the outside cord of a circular truss and dimension. Then you need to select the fixtures on the inside cord and dimension.

Dim Between Lights

This macro will dimension between selected fixtures. You will be prompted in a message box at the bottom of the screen to click where you want the dimension text to be.

Dim Between Lights Incl Ctr

This macro will dimension between selected fixtures. It will also dimension from the center line to the first fixture on each side of center. You will be prompted in a message box at the bottom of the screen to click where you want the dimension text to be.

Dim Between Lights wo 18

Often fixtures on a plot are spaced at a standard interval (usually 18 inches in the US), and the spacing interval is given in a note on the plot; only exceptions to the standard spacing are dimensioned on the plot. This macro will dimension between selected fixtures that have a spacing that is different from the noted standard. You will be prompted in a dialog box to enter the spacing you wish not to display and then prompted in a message box to click where you want the displayed dimension text to be.

Put Dimension in User Field

This macro will prompt you to pick a user field that will put the dimension values generated by any dimensioning macros into the selected user field of the dimensioned fixtures. Only dimension values generated after this command has been used are put in the selected user field.

This has a couple of advantages over exporting the X or Y coordinate of a fixture. Since the above dimension commands can measure from a center line or from a click that is not on the origin of the drawing, it will allow you to make hanging cards that are based on the position of the light relative to the coordinate of your choice. This command will also allow you to pick the option to stop assigning any dimensions to a user field.

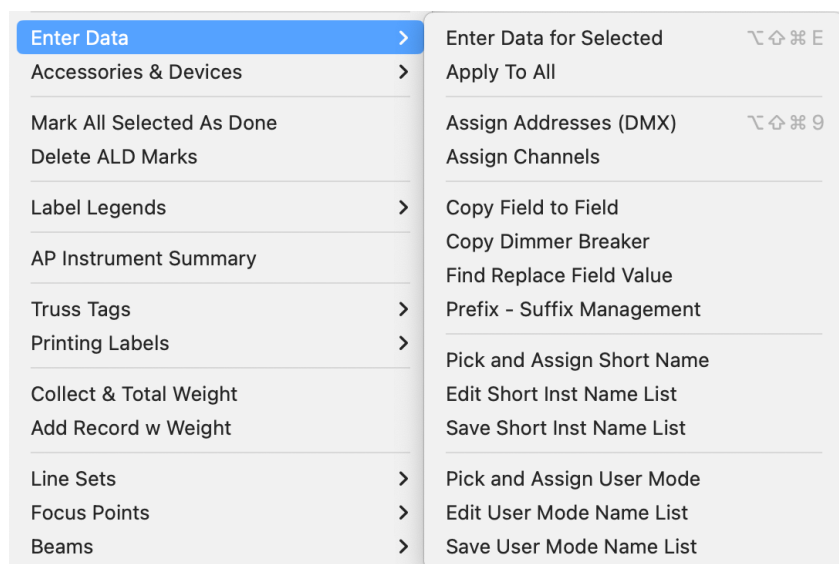
Adjust from Center Line (H)

Adjust from Click (H)

Adjust from Click (V)

These macros are designed to cleanup horizontal dimensions of selected fixtures. Many times fixtures are put down on a position and aligned to that position, but they are not put at “clean” measurement intervals. This can result in unfortunate dimensions like 4’-7 3/8”. This is especially true with the “Dim from Ctr” command. All three macros will ask for a unit of measure that you wish to move to. This unit of measure is typically 6 inches or 3 inches, but can be any unit of measure including metric. The macros “Move To Closest Unit (H)” and “Move To Closest Unit (V)” will ask for a click on the point to measure from which is typically the end or center of the pipe. They will then look at each selected fixture and look in both directions left and right or up and down depending on the macro, and move the fixture to the closest unit of measure. The macro “Move To Closest Unit Ctr” will not ask for a click but will measure horizontally from the Center Line. If no centerline exists the macro will tell you.

ENTER DATA



Enter Data for Selected

Even with the editable worksheets, data entry on multiple fixtures can be tedious. This macro helps a little. It will put up a dialog box of fields to edit for all the selected fixtures, you have the option to sort by Unit Number if you desire. The macro will then put up the dialog for the first fixture. It will fill all the fields with their current value. You can tab and reverse tab (shift tab) between fields. When you hit the return or Enter key on the keyboard or the "Next" button on the dialog it cycles to the next fixture. When you get to the end the macro quits. If you wish to quit the macro before getting to the end of the list there is a "Finish" button on the dialog.

Many times you will want to start entering data in a field other than the "Unit Number." If that is the case, then use the "Default Field" Button to select the field that will be the first field selected for each fixture from then on.

Device Types of "Accessory" and "Device" type will always be selected after the fixture to which they belong. This macro will never include Static Accessories like barn doors even though they may be selected.

The screen will scroll to and highlight the fixture whose data is being edited.

Apply To All

A special command for Andy Dunning that allows for quick assignment of the same values to multiple Lighting Devices.

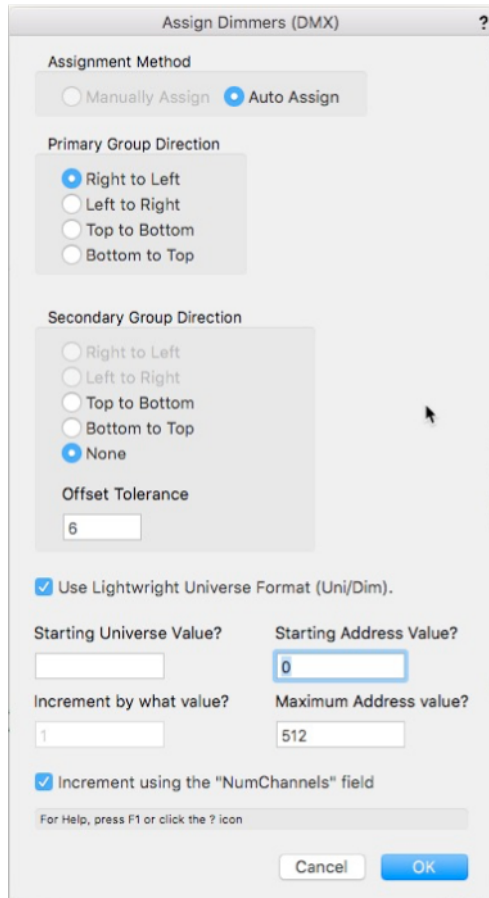
Assign Addresses (DMX)

This macro will assign values to the "Address" field. It assumes that you are assigning DMX address values. The macro will display the dialog described above.

The macro will increment each time by the increment level you set. During manual assignment, hold down the "option"(mac)/"alt"(windows) key or the shift key and this will stop incrementing the DMX value so that the same DMX value can be assigned to multiple fixtures. (Why you would do that is currently beyond my experience.)

Universes, Dimmers, and DMX

All the commands that assign dimmer values are aware of the DMX 512 border and the current universe. All dimmer assignment commands will place a value in the "Universe" field based on the DMX value to be assigned and the starting universe value entered in the dialog shown below. If a DMX value will be assigned that is greater than 512 or a multiple of 512 the Universe value to be assigned will be increased by 1. If the increment value when added to the value to be assigned to the dimmer value crosses the 512 border, the dimmer value to be assigned to the first number in the next universe. All of the dimmer assignment commands will display the following dialog box.

The image shows a software dialog box titled "Assign Dimmers (DMX)". It contains several sections: "Assignment Method" with radio buttons for "Manually Assign" and "Auto Assign" (selected); "Primary Group Direction" with radio buttons for "Right to Left" (selected), "Left to Right", "Top to Bottom", and "Bottom to Top"; "Secondary Group Direction" with radio buttons for "Right to Left", "Left to Right", "Top to Bottom", "Bottom to Top", and "None" (selected); an "Offset Tolerance" text field with the value "6"; a checked checkbox for "Use Lightwright Universe Format (Uni/Dim)"; "Starting Universe Value?" and "Starting Address Value?" text fields (the latter contains "0"); "Increment by what value?" and "Maximum Address value?" text fields (the latter contains "512"); and a checked checkbox for "Increment using the 'NumChannels' field". At the bottom, there is a help note "For Help, press F1 or click the ? icon" and "Cancel" and "OK" buttons.

The "Use Lightwright Universe Format (Uni/Dim) in the "Dimmer" Field" button has been disabled as this is automatically handled by Vectorworks and Lightwright.

The "**Starting Universe Value?**" Is the value of the universe you wish to start with when assigning dimmer values.

The "**Starting Address Value?**" is the DMX value you wish to start with. If you are not using DMX values or integers, you will not be able to use this command.

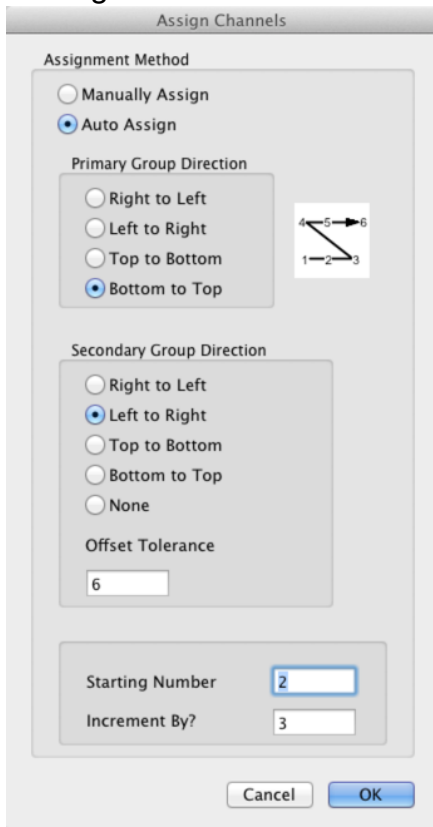
The "**Increment by what value?**" is the amount by which the last value will be incremented to determine the next dimmer value to be assigned.

The "**Maximum Address Value?**" is the limit that you want to put on each universe DMX value.

The "**Increment using the "Num Channels" field**" uses the value in the last fixtures "Num Channels" field to increment to the next value to assign. If there is no value in the fixtures "Num Channels" field, the last assigned number will be incremented by 1. Starting with Vectorworks 2019 this field should always remain checked.

Assign Channels

This macro will show a dialog asking if you want to manually assign channel numbers or automatically assign channels based on screen direction. In all cases you will need to specify the starting channel and the size of the incrementing value.

The image shows a software dialog box titled "Assign Channels". It contains several sections: "Assignment Method" with radio buttons for "Manually Assign" and "Auto Assign" (selected); "Primary Group Direction" with radio buttons for "Right to Left", "Left to Right", "Top to Bottom", and "Bottom to Top" (selected); "Secondary Group Direction" with radio buttons for "Right to Left", "Left to Right" (selected), "Top to Bottom", "Bottom to Top", and "None"; an "Offset Tolerance" text field with the value "6"; a "Starting Number" text field with the value "2"; and an "Increment By?" text field with the value "3". There is a small diagram showing a zigzag path with nodes numbered 1 through 6. At the bottom are "Cancel" and "OK" buttons.

If you pick automatic channeling you will be allowed to specify 2 different sorts which will let you assign channels to arrays of fixtures.

During manual channeling, hold down the "option"(mac)/"alt"(windows) key or the shift key and this will stop incrementing the channel number so that the same channel value can be assigned to multiple fixtures.

Make Custom Fixture WKS

This macro will make an editable worksheet of all the fixtures in the drawing. The user will be able to select the fields to be included and the order that the fields appear. The macro will automatically include the "Alt- " fields to provide numeric sorting. The user will be responsible to place the sorting icons after the macro is created

Copy Field to Field

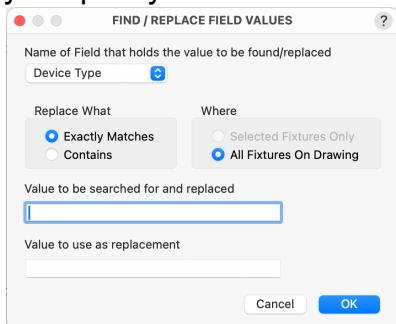
This macro will let you copy the value of one or two fields into another field. This action will be performed on all the selected fixtures, but the data will remain fixture specific. This command would allow you to combine the "Circuit Name" and "Circuit Number" fields into another "User.." field if you so desired

Copy Dimmer Breaker

This macro will either copy the Dimmer values to the Breaker ID values or the Breaker ID values to the Dimmer values, users choice. This is just a shortcut for the command above to make creating a breaker or dimmer worksheet more quickly.

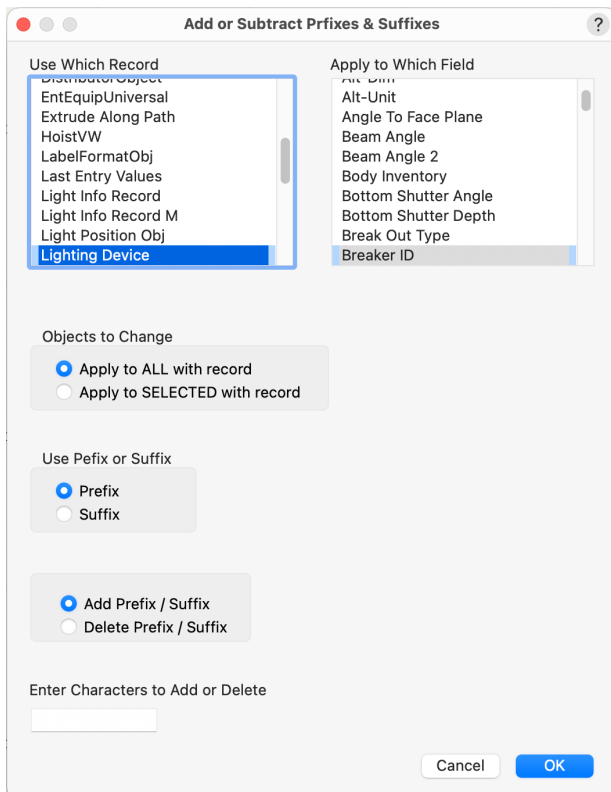
Find Replace Field Value

One glaring omission in SL's "Find and Modify" command is the "Contains" operator. Suppose you want to change all 9 fixtures that have the Purpose value of "Cool BackLight SL", "Cool BackLight CS", and "Cool BackLight SR" **to the value of** "Warm BackLight SL", "Warm BackLight CS", and "Warm BackLight SR". You could not search for the value "Cool BackLight" because of the "SL", "CS", and "SR" designations. What is needed is a find and replace command that allows you to search for all the fixtures that Contain the "Cool Backlight" value and replace just that part of the value with a specified value, e.g. "Warm Backlight. This macro gives you this ability. In addition, if a fixture is selected at the time the macro is run the macro will automatically fill in the value of the selected field with the value in the selected fixture. For example, you could select a fixture with "Cool Backlight DSL" in the Purpose field, and run the macro. If you select the Purpose field to search with, the macro will fill in "Cool Backlight DSL" in the dialog prompt, which you could then edit, to "Cool Backlight," and the macro would select all the cool backlight and replace the that value with whatever you specify

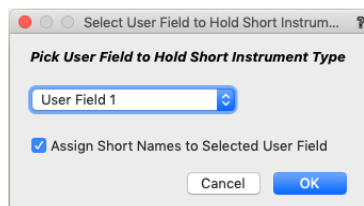


Prefix - Suffix Management

This macro will allow you to place or remove a prefix or a suffix from a selected field of a selected record for *all* or *just selected* objects with the selected record. Parameter fields, like displayed in the Lighting Device Object Info Palette, are record fields,



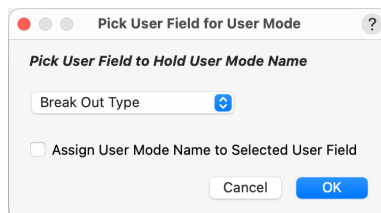
Pick and Assign Short Name



The name values that are assigned to the “Instrument Type” field by Vectorworks are often long and difficult to use in reports, truss tapes, and other paperwork or Vectorworks tags. It becomes problematic to change these values, because doing so will change other drop down values such as the one in the “Fixture Mode” and other fields in the Object Info Palette of the Lighting Device. If you wish you can use this command to assign an instrument type value to a user field of your choice. This command will present the dialog above in which you are asked to pick a user field to hold the shortened instrument type value. All the user fields, including custom user fields, will be presented to choose from. There is also a check box to confirm the assignment of shortened values to the selected field. It is allowed to pick a field, and not make the assignment at that time. The field you choose will be remembered by this command.

The values that are assigned to the chosen user field are controlled by the following two commands, “Edit User Type Mode List” and “Save User Type Mode List”.

Pick and Assign User Mode



Listing the fixture mode you desire has always been problematic in Vectorworks Spotlight. You can pick a user field or custom field in which to put your own version of fixture mode. Typically this would be whatever is displayed by the fixture when picking a mode on that fixture. It will also populate the “DMX Footprint” field with the footprint you specify, and select the fixture mode value you specify. Typically you will select none if the mode you desire is not listed in the Fixture Mode parameter of the Lighting Device

The values that are assigned to the chosen user field are controlled by the following two commands, “Edit User Type Mode List” and “Save User Type Mode List”.

Edit User Type Mode List

X + Short Names and Modes WKS @ 100%					
File Edit View Insert Format Database Help					
A1 X ✓					
	A	B	C	D	E
1					
2	VW Instrument Type	VW Mode Name	VW DMX Footprint	User Instrument Type	Fixture Mode set to "None" User Mode
3	Ayrton Cobra 2	None	45	Ayrton Cobra 2	45Ch
4	Chauvet Ovation Reve E3 19deg	None	21	Ovation Reve E3 19deg	21Ch
5	Chauvet Ovation Reve E3 19deg	None	3	Ovation Reve E3 19deg	3Ch
6	Chauvet Ovation Reve E3 19deg	None	8	Ovation Reve E3 19deg	8Ch
7	Chauvet Ovation Reve E3 26deg	None	21	Ovation Reve E3 26deg	21Ch
8	Chauvet Ovation Reve E3 26deg	None	3	Ovation Reve E3 26deg	3Ch
9	Chauvet Ovation Reve E3 26deg	None	5	Ovation Reve E3 26deg	5Ch
10	Chauvet Ovation Reve E3 26deg	None	8	Ovation Reve E3 26deg	8Ch
11	Chauvet Ovation Reve E3 50deg	None	21	Ovation Reve E3 50deg	21Ch
12	Chauvet Ovation Reve E3 50deg	None	3	Ovation Reve E3 50deg	3Ch
13	Chauvet Ovation Reve E3 50deg	None	5	Ovation Reve E3 50deg	5Ch
14	Chauvet Ovation Reve E3 50deg	None	8	Ovation Reve E3 50deg	8Ch
15	Clay Paky Axcor Spot 400	None	23	Clay Paky Axcor Spot 400	23Ch
16	Clay Paky Axcor Spot 400	None	28	Axcor Spot 400	28Ch
17	Clay Paky Axcor Spot 400	None	0	Clay Paky Axcor Spot 400	None
18	ColorForce2-72in-Floor	Chroma Q Color Force 12 m3.lit	36	ColorForce2-72in	Color Force 12 m3.lit
19	ETC Source 4 PAR WFL	None	1	Source 4 PAR WFL	-
20	ETC Source4 19deg	None	1	Source4 19	-
21	ETC Source4 19deg	ETC Source 4 19.lit	1	Source4 19	-
22	ETC Source4 19deg 750W	ETC Source 4 19.lit	1	Source4 19 750W	-
23	ETC Source4 26deg 750W	ETC Source 4 26.lit	1	Source4 26 750W	-
24	ETC Source4 36deg	ETC Source 4 36.lit	1	Source4 36	-
25	ETC Source4 50deg 750W	None	1	Source4 50 750W	-
26	ETC Source4 70deg 750W	None	1	Source4 70deg 750W	-
27	Martin MAC Viper Performance-Floor	Martin Mac Viper Performance 16.lit	39	Viper Performance-Floor	Viper Performance 16
28	Martin MAC Viper Profile	Martin Mac Viper Profile Ext.lit	33	Viper Profile	Viper Profile Ext
29	Martin MAC Viper Profile	Martin Mac Viper Profile Basic.lit	33	Viper Profile	Viper Profile Basic
30	Martin MAC Viper Profile-Floor	Martin Mac Viper Profile Ext.lit	33	Viper Profile-Floor	Viper Profile Ext
31	Martin Mac Aura XB	Martin Mac Aura XB Ext.lit	25	Aura XB	Aura XB Ext
32	Martin Mac Aura XB-Floor	Martin Mac Aura XB Ext.lit	25	Aura XB-Floor	Martin Mac Aura XB Ext
33					
34					
35					
36	You must run the "Save User Type Mode List" command to save your edits.				
37	They will not take effect until you run that command.				
38					
39					
40					

This command will present a worksheet that lists all the Instrument Type values and associated fixture mode types in the document and all other Instrument Type values that you may have entered from other Vectorworks drawings. This list never goes away; it just keeps growing as you use different instrument types in different plots. This list is used by *both* the "Pick and Assign Short Name" and the "Pick and Assign User Mode" commands.

Save User Type Mode The List

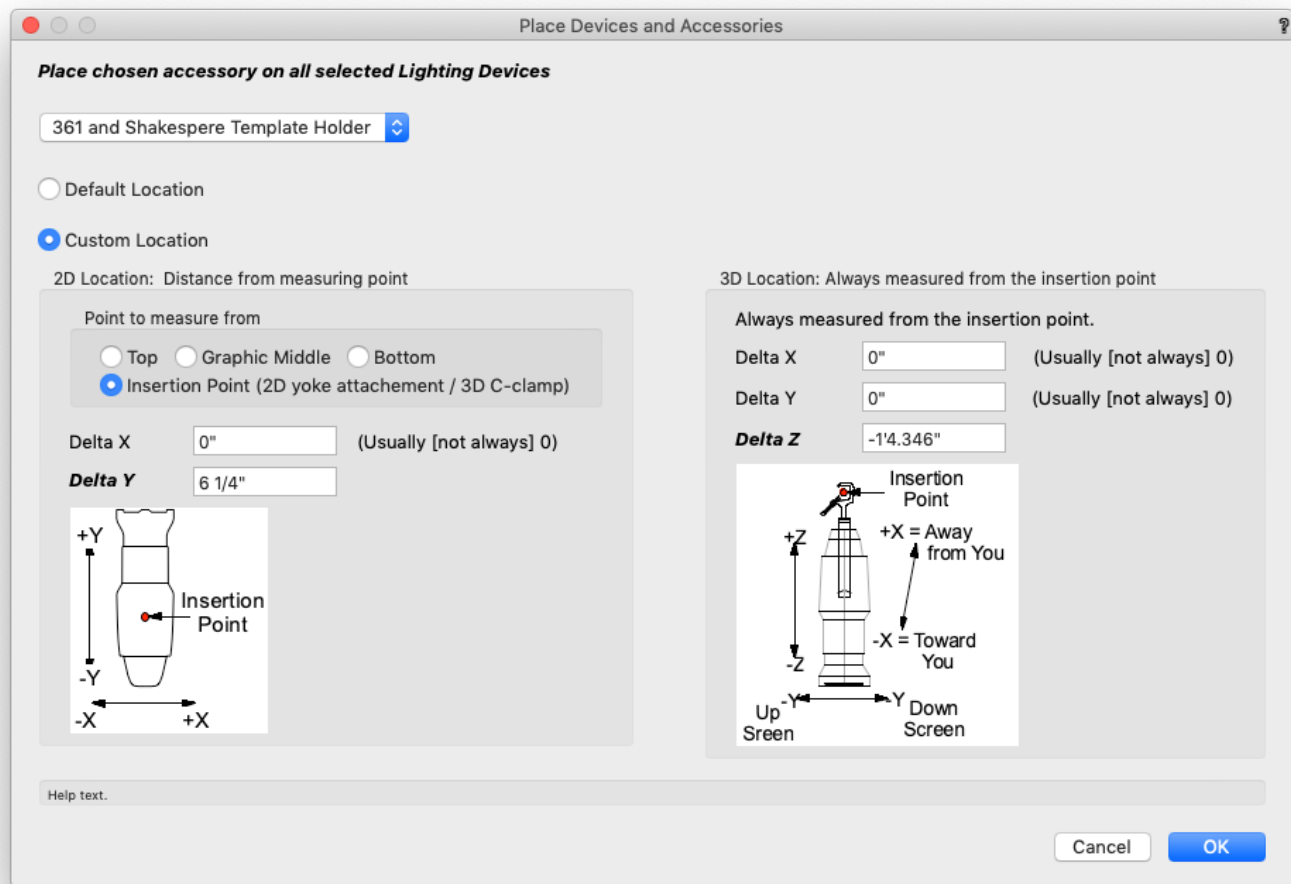
This command will save the values entered into the above worksheet.

Accessories & Devices

Accessories & Devices	>	Place Devices and Accs
Label Legends	>	Delete All Accs From Select
AP Instrument Summary		Delete Chosen Accessories
Truss Tags	>	Collect & Total Accessories

Place Devices and Accs

This macro will present a list of all the accessory symbols in the document. After choosing an accessory to insert, the user can specify the location where the accessory can be placed



If a custom location is chosen, the user must specify the point from which the specified location will be measured, and then the distances to be used to place the accessory. The dimensions from each of the measurement points will be remembered the next time the command is used. The default location is the front of the light

Select By Accessory Example

This command presents a drop down of the accessories that are resources in the current document. If the current selection has an accessory, that accessory will be the default selection in the drop down menu, but users can make any selection in the menu that they wish. When the dialog is dismissed all the Lights and Moving Lights that have the selected accessory will be selected

Delete All Accs From Select

This macro will remove all the accessories from the selected Lighting Devices

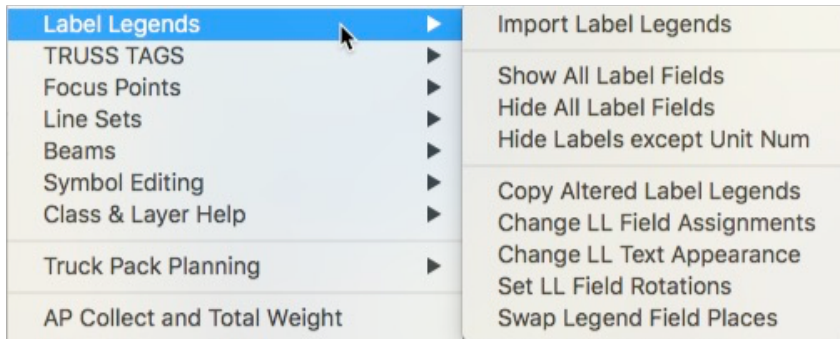
Delete Chosen Accessories

This macro will list all the accessories that are attached to the selected Lighting Devices. The user will then select the accessory or accessories that he wishes to remove from the selected Lighting Devices.

Collect & Total Accessories

This macro will collect the names of all the accessories assigned to Lighting Devices in the document and count the number that are placed in the document and list the results in a worksheet.

LABEL LEGENDS



Import Label Legends

This macro imports a set of predefined label legends into your document. See the discussion of Label Legends at the beginning of the document. These label legends are stored in a VectorWorks document located in the "APSpotlight_Data" folder inside inside the "APS_Plug-Ins" inside the "Plug-Ins" folder located in the User Folder.

Show All Field Labels

This macro will show all the classes that begin with "Label-". This has the effect of showing all the text in the label legends and is used in conjunction with the macro above. If you have both the "Circuit Name" and the "Circuit Number" in your labels, you may need to use one of the macros above after turning on all the label classes.

Hide All Label Fields

This macro will hide all the classes that begin with "Label-". This has the effect of hiding all the text in the label legends. I have found this useful; you may or may not.

Hide Labels except Unit Num

This macro will hide all the classes that begin with "Label-". This has the effect of hiding all the text in the label legends, **except** the "Unit Number". I have found this useful; you may or may not.

Copy Altered Label Legends

This macro will copy the altered label field positions from a one light to all the selected lights. To use this macro, first select all the fixtures you wish to change and then select the macro command. The macro will then ask you to click on the fixture that has the label positions you wish to use. The fixture you pick may or may not be part of the originally selected group.

Change LL Field Assignments

This will let you change what a text field in a label legend displays. For example if you have a label legend field displaying "User Field 1" you can use this macro to tell every label legend that displays "User Field 1" to display "User Field 2".

Change LL Text Appearance

This macro will let the user globally change the font, size, style, fill, color, and container of each field in the documents label legends. It will change the characteristics of a field or fields in all Label Legends or only in selected Label Legends.

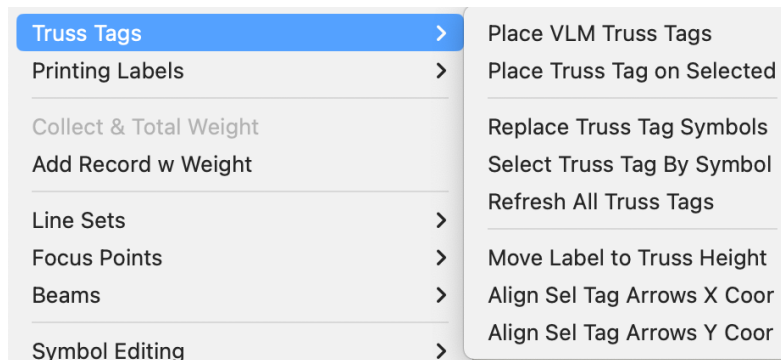
Set LL Field Rotations

This macro will let you set whether or not an individual label field will rotate with the unit or not rotate. For example, if you set an up facing label legend to not rotate in the label legend manager, you can use this command to set only the color field to rotate.

Swap Legend Field Places

This macro will swap the positions of two selected fields and do the swap for selected label legends only.

TRUSS TAGS



Place VLM Truss Tags

Refresh All Truss Tags

Select Truss Tag By Symbol

Move Label to Truss Height

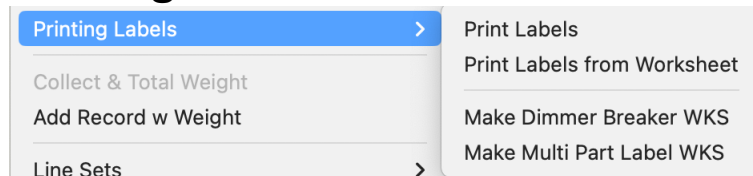
Reset Truss Tag Pointers

Align Sel Tag Arrows X Coor

Align Sel Tag Arrows Y Coor zz

The “TRUSS TAG Objects and commands” command will ask you to click on truss assemblies in your drawing. It will then collect some data and display a truss label on the drawing. There is much more to the capabilities of this command in collecting and displaying data. The Truss Tag objects and commands are explained in the document. “***TRUSS TAG Objects and commands.pdf***”.

Printing Labels



Printing labels on sheets is easy using AutoPlot Tools, but there are a lot of different parts to understand in order to get the labels you want printed. The process is very similar to the one used to make Truss tapes. I am currently working on the outline of the Print Labels documentation. Until that time, if you want to schedule a time to Zoom with me I can walk you through the process of making and using the labels you want.

Print Labels

Print Labels from Worksheet

Creating Data for Printing Labels

Lightwright's label making capabilities are spectacular, but they do not handle data from different lights or different sources (lights and cable). Very well. AutoPlot and Vectorworks labels will make labels from anything you can put in a worksheet cell. The trick is making a worksheet with the information you need.

Make Dimmer Breaker WKS

This macro will create a worksheet that will collect the data from all the lights that share the same Breaker ID or the same Dimmer value. Multiple values can be listed in the same cell. This will allow you to make labels for dimmer racks and power distros.

Make Multi Part Label WKS

This macro will create a list of cable parts with each part being placed in its own row. A single cable run made up of 3 parts will use 3 rows. This allows the user to make labels for each part of a cable run. Multiple labels for the same part can be specified, e.g. 2 labels for each cable part, one for each end.

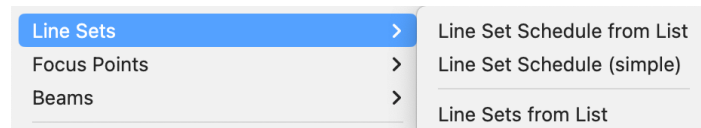
Collect & Total Weight

This macro will create a worksheet that shows the weight of all the selected objects and totals them. It then displays the worksheet. This not only provides you with a weight total, but it also provides a way to check what is the weight assigned to each object. This command looks for a record or Object Info Palette (OIP) field that contains the word "weight". It will then collect the value of that field. If there is more than one field that contains the word "weight", it will use the value of the first field it finds. This may not be the field you want to use. You will need to check the worksheet for weight values that seem anomalous.

Add Record w Weight Field

This macro will ask for a weight value and assign that weight value to all the selected objects. If the objects are lighting devices it will also assign the weight value to the Light Info Record of the appropriate symbol, so that the next time you insert that type of fixture it will have that weight value. If some of the objects that are selected do not have a record with a field containing the word "weight", a record named "Added Object Info Record" will be assigned to the object and the value will be placed in the weight field. If the object is a symbol, that record will be added to the symbol definition.

LINE SETS FROM WORKSHEETS



The List

Both commands below will read a worksheet that is a list of line sets. The worksheet must be named "Line Sets". If a line sets worksheet does not exist, one will be created and the user will be told to fill in the information in the worksheet and run the macro again. The information in the worksheet is held in five columns. The first row contains column labels, "Line#," "Distance", "Label", "Trim", and "Category". In the first column labeled "Line#," the user should enter the number of each line set or the label that you want to display by the line set. In the second column labeled "Distance," the user should enter the distance from the plaster line or from any point that you desire that the line set be measured from. In the third column labeled "Label," the user should enter any additional label information they desire. In the fourth column labeled "Trim," the user should enter the height from the stage for the trim of this line set; in actual fact, you can enter anything you wish here as long as it is a distance. In the fifth column labeled "Category", the user can enter anything. The "Category" column is designed to provide a way to categorize multiple line,sets. Examples of categories are, "Electrics", "Masking", "Audio", "Do Not Move", and anything that describes a group of linesets. The only column that requires an entry is the "Distance" column. When the command encounters a blank cell in the "Distance" column making the list stops. The values in the worksheet columns are entered into the "LINESET Element Record" that is attached to each symbol used in the "Line Set Schedule from List" command below.. This will be useful if you wish to implement Data Visualization

Line Set Schedule from List

This macro will layout a schedule of line sets of up the screen according to information provided in the worksheet named "Line Sets", and a click provided by the user. You will be asked to click on where you want the schedule to be presented. The line set schedule will be laid out and measured from the X, Y coordinate of the click. The X coordinate of the click will be used to align the schedule symbols and the Y coordinate will be where the distances are measured from, usually the plaster line or the smoke pocket. The line set schedule is made from symbols whose origin is placed at the X coordinate of the click and the the Y coordinate plus the distance value entered in the worksheet. The "LINESET Element Record" is attached to the symbol being used, and text fields are attached to that record. Values in the worksheet are assigned to the record of each symbol being placed, and the symbols display those values. One of 2 possible symbols will be used, "Line Set Element L" or Line Set Element R". Which one will be used is determined by which direction, Left or Right, that you picked in the dialog. Any previous schedule on the active layer will be erased. Schedules on other layers will not. The provided symbols are 3D symbols and can be rotated in 3D. The values in the record attached to symbols can be used in any Data Visualizations you wish to set up.

Line Set Schedule (simple)

This macro will layout a schedule of line sets of up the screen according to information provided in the worksheet named "Line Sets", and a click provided by the user. This is a very simple version of the command above, and it can be conveniently used to layout a list of distances listed in the worksheet on the drawing.

Line Sets from List

This macro will layout line sets (pipes) of up the screen according to information provided in the worksheet named "Line Sets", and a click provided by the user. The click is considered the downstage location that the each of the line sets is measured from.

Once this worksheet is filled in, when the macro is run, the user will be presented with the following dialog:

After accepting the settings with clicking the “OK” button, you will then be asked to click on the drawing at the place you wish to measure from. Line sets will be drawn on the active layer.

FOCUS POINTS

Focus Points	▶	Make Focus Pts from Text
Line Sets	▶	Make Focus Point Grid
Beams	▶	Show Focus Points
Symbol Editing	▶	Hide All Focus Points

Make Focus Pts from Text

This macro will create Focus Point objects from selected text objects. The Name field of the focus point is given the value of the selected text and the original text will be deleted. More than one text object can be selected, allowing for multiple Focus Point objects to be created.

Make Focus Point Grid

This macro will create an orthogonal grid of focus points with spacing and height that the user inputs. **Warning!** Spotlight has a limit of 100 focus points that it can list in the “Focus Instruments” command. You can have more than 100 focus points, but you will have to type the name of a focus point into the “Focus” field in the Object Info palette if you have more than 100 focus points, which is likely after using this command.

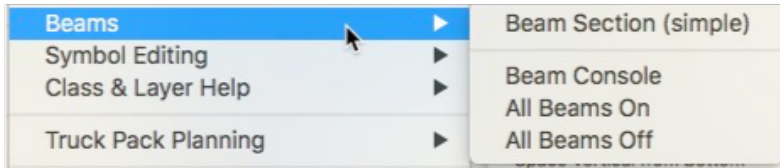
Show Focus Pts.

This macro will make all the Focus Points visible.

Hide All Focus Points

This macro will make invisible all the Focus Points.

BEAMS

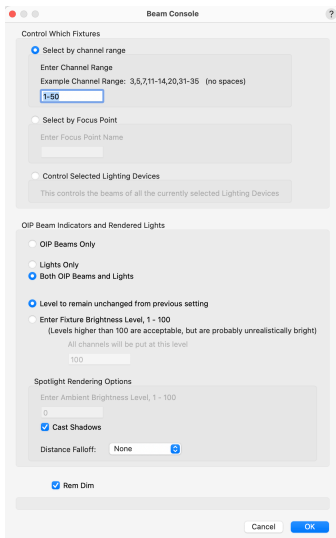


Beam Section (simple)

When you want a quick and dirty indication of a beam, spread draw a line and use this macro.

Before using this macro, draw a line from the fixture to the center beam focus point. Leaving this line selected activate this macro and fill in the beam spread in degrees; the macro will then draw two lines with arrow ends, one on each side of the selected focus line which represents the beam's section.

Beam Console



This macro allow you to make a channel list of Lighting Devices whose beams you wish to turn on. There is also a “Rem Dim” check box. Alternatively, you can specify a Focus Point name that can be used to choose the fixtures whose beams you wish to turn on.

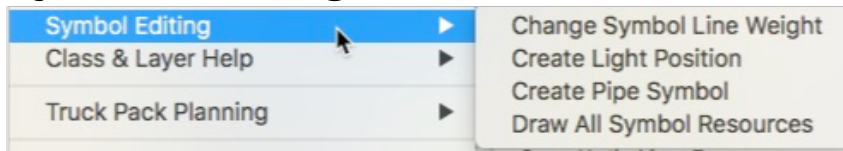
All Beams On

This macro will go through the plot and check the Draw Beam button for every fixture so that focused beams are shown.

All Beams Off

This macro will go through the plot and un-check the Draw Beam button for every fixture so that no beams are shown.

Symbol Editing



Change Symbol Line Weight

Often when you import graphics for fixture symbols from other sources you will want to adjust their line weights to suit your taste. In addition, many of us feel that the same line weight is not appropriate for both 1/4 in and 1/2 in plots.

This macro will change the line weight of graphic objects in all the selected fixture symbols. Be aware that if you select one fixture and run this macro, all the fixtures that use that symbol will be changed. You will be asked if you want to change all the fixtures in the drawing. If you answer "Yes", then all the fixtures that are attached to the "Lighting Device" record will be changed (all the fixtures in the drawing); if you answer "No", only the selected fixtures and those like the selected fixtures will be changed.

You will be asked to specify a line weight that you wish to change to. You will then be asked if you want to change all the line weights in the symbols to the specified line weight. If you answer "Yes," every graphic object in the symbol will be changed to the specified line weight. If you answer "No," you will then be asked to input the line weight you wish to change to the earlier specified line weight. The macro will only change line weights that meet the second input line weight. For example, you can change all the lines to a 10 point line weight, or you can change only those objects that are line weight 7 to line weight 10.

Create Light Position

Spotlight allows you to call almost anything a lighting position, which is good. However, to work well, a lighting position should be made from a hybrid symbol, that is a symbol that has a 2D description for plan view and a 3D description for all other views. Having to create this symbol before creating a lighting position can be especially irritating when one is just dealing with battens that are parallel to the floor. This macro simplifies the process

Select an existing line or rectangle, or create a new line or rectangle and leave it selected. Invoke this macro. It will ask you for the height of the position and then create a hybrid symbol placed at that height above the 0 z level of the active layer. The symbol will be given a name that is its length plus the word "PIPE," for example, 41'3" PIPE. **It will then turn that symbol into a "Light Position" object and ask you to name it**

From Vectorworks 2019 onward, a "**Hanging Positon**" will be created.

Create Pipe Symbol

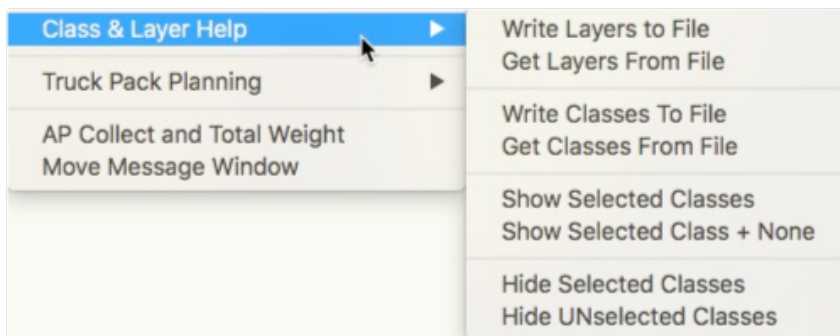
Spotlight allows you to call almost anything a lighting position, which is good. However, to work well, a lighting position should be made from a hybrid symbol, that is a symbol that has a 2D description for plan view and a 3D description for all other views. Having to create this symbol before creating a lighting position can be especially irritating when one is just dealing with battens that are parallel to the floor. This macro simplifies the process

Select an existing line or rectangle, or create a new line or rectangle and leave it selected. Invoke this macro. It will ask you for the height of the position and then create a hybrid symbol placed at that height above the 0 z level of the active layer. The symbol will be given a name that is its length plus the word "PIPE," for example, 41'3" PIPE. This command **will not** automatically create a Light Position object.

Draw all Symbol Resources

This command will create a design layer called "Symbol Display Layer", and then it will place one instance of every symbol in the drawing resources. The instances are placed based on the settings entered in the commands dialog.

Class & Layer Help



Write Layers to File

This command will create a text file that contains the name and attributes of all the layers in the active file.

Get Layers From File

This command will prompt you to pick a file that contains a list of Layers and layer attributes. When the file is selected, the command will create a layer for each layer name in the file with the attributes for that layer. If that layer name already exists, the layer will not be created.

Write Classes to File

This command will create a text file that contains the name and attributes of all the classes in the active file.

Get Classes From File

This command will prompt you to pick a file that contains a list of Classes and class attributes. When the file is selected, the command will create a class for each class name in the file with the attributes for that class. If that class name already exists, the class will not be created.

Show Selected Classes

This macro makes visible all objects that have the same class as the selected objects in the document. All other classes are made invisible.

Show Selected Class + None

This macro makes visible all objects that have the same class as the selected objects in the document. It also makes sure the "None" class is made visible whether or not there is an object in the None class selected. All other classes are made invisible.

Hide Selected Classes

Select the objects that are examples of the classes you want to hide. This macro will hide all objects that are members of the same classes exemplified by the selected objects.

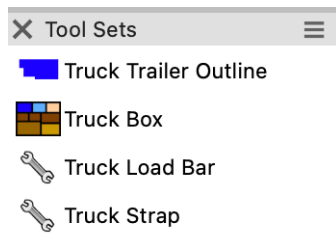
Hide UNselected Classes

Select the objects that are examples of the classes you want to see. This macro will hide all objects that are not members of the classes exemplified by the selected objects.

Truck Pack Planning

4 smart objects and 12 menu commands are provided to help plan a truck pack.

Truck Packing Smart Objects



Truck Trailer Outline

This object will create a 3D model of a truck trailer. There is provision in the OIP to create a raised platform at the front of the trailer, some times called a “Dance Floor”, and there is provision in the OIP to create a space over the cab. One can test the truck pack or notate an already packed truck by placing Truck Box objects in the Truck Trailer model.

Truck Box

If you select this object from the AutoPlot Tool palette, It will place and extruded rectangle on the drawing that represents an object you wish to place on the truck. The dimensions of the object can be controlled in the Object Info Palette (OIP). There are a number of fields that can be displayed on the box and the size and rotation of the text that displays them can be controlled in OIP. In addition the bottom of the box is marked in black so that the orientation of the box can be displayed. The orientation of a box can be controlled with the following buttons, Stand Up, Tip Forward, Tip Back, Tip Left, and Tip Right. These buttons can be combined with rotating in plan view to place the box in almost any postion.

Placing boxes with the Truck Box tool can be tedious, so two commands have been provided to create multiple boxes from a list. See “Create Boxes from File” and “Create Boxes from Worksheet” below.

Truck Load Bar

This object represents a truck load bar and can be placed in the truck. It's height above the floor is controlled by the Z parameter

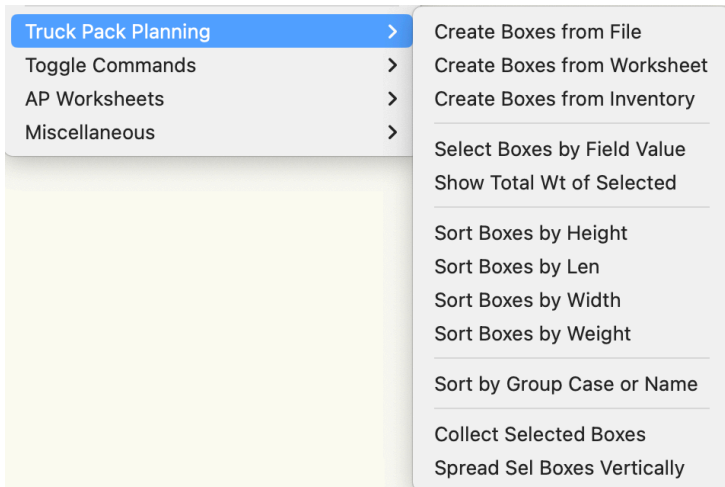
The Truck Strap and the Truck Load Bar are almost two versions of the same object. Different versions are provided to allow for counting.

Truck Strap

This object represents a truck strap and can be placed in the truck. It's height above the floor is controlled by the Z parameter

Truck Packing Menu Commands

Nine commands are provided to help create multiple boxes and to sort and select them:



Create Boxes from File

This macro will prompt you to select a tab delimited file. Each row will represent a box, and each row will have the following tab separated values.

Group, Case, Name, Length, Width, Height, Weight, Row, Truck Side, Stack Level, Truck, Note, UID. The first row of the text file will contain the above column names separated by tabs. Each of the following rows will represent a box. Only 3 of the columns are required to have a value, Length, Width, and Height, the rest can be blank but must be separated by tabs. Such a file can easily be created in Excel and might look like this:

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Group	Case	Name	Length	Width	Height	Weight	Row	Truck Side	Stack Level	Truck	Note	UID
2	A	1	PM1D	81	22	58	10 lbs	R1	Driver	1	T1		94
3	A	2	Yamaha Rack	46	40	67	20 lbs	R2	Passenger	1	T2		90
4	A	3	FOH Racks	48	30.5	43	30 lbs	R3	Middle	2	T3		89
5	A	4	FOH Support	33	22	33.5	40 lbs	R4	Driver	2	T4		80
6	A	5	FOH Bundles	48	26	35							81
7	A	6	FOH Bundles	48	26	35							82
8	A	7	Audio Workt	34	29	60							91

Such an excel must be saved as a tab delimited text file. Once a file has been found this command will read it and create a Truck Box object for each row. You will be prompted to click on the location where all the boxes will be created. All the boxes listed in the text file will be placed at that location. You can then drag them to a truck trailer model or wherever you wish.

Create Boxes from Worksheet

This macro will look for a worksheet named "Truck Box List". If one does not exist, a dialog will be displayed asking if you want to create one. If you answer in the affirmative, an empty worksheet will be created for you to fill in. Once there is a worksheet named "Truck Box List" in the drawing with data in it, a Truck Box will be created for each row. You will be prompted to click on the location where all the boxes will be created. All the boxes listed in the worksheet will be placed at that location. You can then drag them to a truck trailer model or wherever you wish.

Create Boxes from Inventory

This macro will prompt you to select a tab delimited file. Each row will represent a box, and each row will have the following tab separated values.

Name, Length, Width, Height, Weight, lb or kg, Company, Stack Level, Type, Qty.

The first row of the text file will contain the above column names separated by tabs. Each of the following rows will represent a "kind" of box. The last column, the "Qty" column, will have a number. Any number greater than "0" will be the number of that box that is created.. Such a file can easily be created in Excel and might look like this:

D19										
	A	B	C	D	E	F	G	H	I	J
1	Name	Length	Width	Height	Weight	lb or kg	Company	Type:	Qty	
2	Case Eighth	24"	24"	6"		28 lb	Christie Lites	Eighth Stand	0	
3	Motor Distro	24"	24"	12.75"		39 lb	Christie Lites	Quarter Stand	0	
4	Utility	24"	24"	12.75"		40 lb	Christie Lites	Quarter Stand	0	
5	Safety	24"	24"	12.75"		40 lb	Christie Lites	Quarter Stand	0	
6	Tree Dim	24"	24"	12.75"		43 lb	Christie Lites	Quarter Stand	0	
7	Lepr612	24"	24"	12.75"		44 lb	Christie Lites	Quarter Stand	0	
8	Com	24"	24"	12.75"		44 lb	Christie Lites	Quarter Stand	0	
9	ION	24"	24"	12.75"		44 lb	Christie Lites	Quarter Stand	0	
10	ION Xe	24"	24"	12.75"		44 lb	Christie Lites	Quarter Stand	0	
11	Utility	24"	24"	26"		64 lb	Christie Lites	Half Standard	0	
12	Snake Case	24"	24"	26"		64 lb	Christie Lites	Half Standard	0	
13	504' Fiber	24"	24"	26"		68.5 lb	Christie Lites	Half Standard	0	

Such an excel file must be saved as a tab delimited text file. The file may be located anywhere on your hard disk. A file named "AP Box Inventory List.txt" is provided in the download and is available for you to edit and use. It is located in the User folder: VW2021/APS_Plug-Ins/APSspotlight_Data/AP Box Inventory List.txt.

Select Boxes by Field Value

This macro will present a dialog for you to pick a field and a value for that field. It will then select all the Truck Boxes that have that value in that field.

Show Total Wt of Selected.

This command will show the weight of all the selected Truck Boxes that have a value greater than 0 in the Weight field. The number of boxes that have 0 in the Weight field will be displayed, but a total weight will still be reported.

Sort Boxes

Sort Boxes by Height
Sort Boxes by Len
Sort Boxes by Width
Sort Boxes by Weight
Sort by Group Case or Name

These commands sort the selected boxes and lay them out from a prompted user click.

Toggle Commands

Toggle Simplified Truss

This macro will toggle the visibility of the “Simplified Truss” class. It will turn it off if it is on. It will turn it on if it is off. I use this primarily to hide the Simplified Truss class.

Toggle Adjust Flipped Text

This macro will toggle the setting of Adjust Flipped Text. It will turn it off if it is on. It will turn it on if it is off

Toggle All Focus Points

This macro will toggle the visibility setting of all the focus points

Toggle Auto Positioning

This macro will toggle the setting of auto positioning of Lighting Devices. It will turn it off if it is on. It will turn it on if it is off

Toggle Gray Others Editing

This macro will toggle the setting of “Grey others while editing” setting. It will turn it off if it is on. It will turn it on if it is off

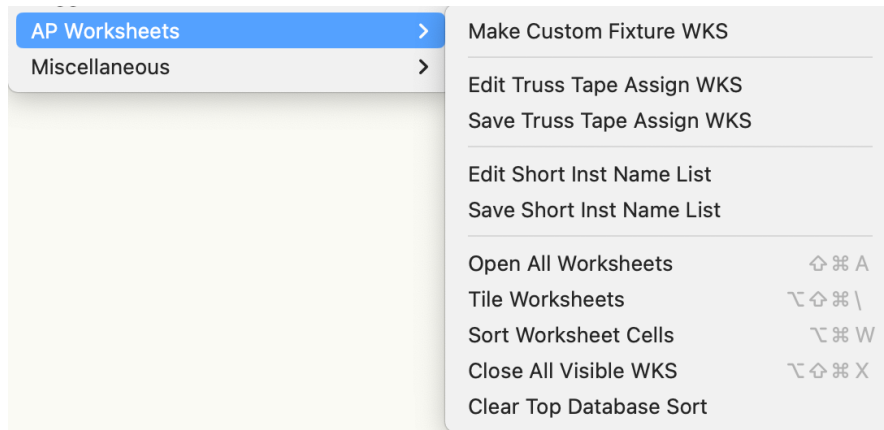
Toggle Layer Colors

This macro will toggle the setting of Layer Colors. It will turn it off if it is on. It will turn it on if it is off

Toggle Show Others Editing

This macro will toggle the setting of “Show others while editing” setting. It will turn it off if it is on. It will turn it on if it is off

AP Worksheets



Make Custom Fixture WKS

This is an easier way to make a Lighting Device database worksheet with the columns you want.

Edit Truss Tape Assign WKS

A screenshot of a spreadsheet titled 'Truss Tape Label Fields @ 100%'. The spreadsheet has a menu bar with 'File', 'Edit', 'View', 'Insert', 'Format', 'Database', and 'Help'. Below the menu bar is a toolbar with 'A1', 'X', 'Y', 'Z', 'RECORD', and a checkmark icon. The spreadsheet itself has columns labeled A through O. Column A is 'RECORD', column B is 'NAME', column C is 'VALUE TO FIND', column D is 'USE SYMBOL', column E is 'USE CTR ONLY', column F is 'ASSIGN TO TAG FIELD 1', column G is 'ASSIGN TO TAG FIELD 2', column H is 'ASSIGN TO TAG FIELD 3', column I is 'ASSIGN TO TAG FIELD 4', column J is 'ASSIGN TO TAG FIELD 5', column K is 'ASSIGN TO TAG FIELD 6', column L is 'ASSIGN TO TAG FIELD 7', column M is 'ASSIGN TO TAG FIELD 8', column N is 'ASSIGN TO TAG FIELD 9', and column O is 'ASSIGN TO TAG FIELD 10'. The rows contain various data points, including 'AP Multicable', 'Break Out Type', 'Loom ID', 'Show label', 'Function', 'DistroPort', 'Universe', 'DMX Address', 'Fixture Mode', 'Up Screen Length', 'Down Screen Length', and 'Note'. A note at the bottom of the spreadsheet reads: 'You must run the "Save Truss Tape Assign WKS" command to save your edits. They will not take effect until you run that command.'

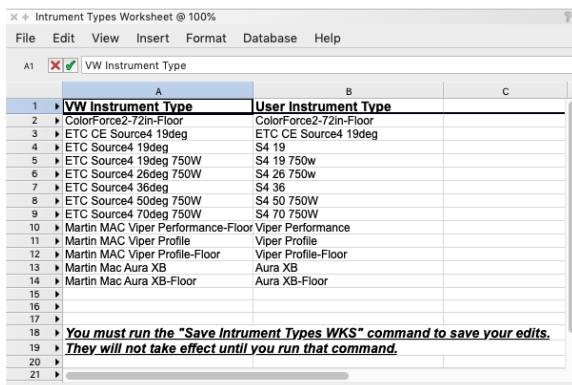
This command will present a worksheet that will enable you to assign the symbol and record fields that are displayed on truss tapes based on the record attached to each object.

The only way to save your edits to this list, is to use the command below.

Save Truss Tape Assign WKS

This command will save the values entered into the above worksheet.

Edit Short Inst Name List



The screenshot shows a spreadsheet titled 'Instrument Types Worksheet' with two columns: 'VW Instrument Type' and 'User Instrument Type'. The list includes various ETC Source4 models (19deg, 19deg 750W, 26deg 750W, 36deg, 50deg 750W, 70deg 750W) and Martin MAC Viper models (Performance-Floor, Profile, Profile-Floor, Mac Aura XB, Mac Aura XB-Floor). A note at the bottom states: 'You must run the "Save Instrument Types WKS" command to save your edits. They will not take effect until you run that command.'

VW Instrument Type	User Instrument Type
ColorForce2-72in-Floor	ColorForce2-72in-Floor
ETC CE Source4 19deg	ETC CE Source4 19deg
ETC Source4 19deg	S4 19
ETC Source4 19deg 750W	S4 19 750w
ETC Source4 26deg 750W	S4 26 750w
ETC Source4 36deg	S4 36
ETC Source4 50deg 750W	S4 50 750W
ETC Source4 70deg 750W	S4 70 750W
Martin MAC Viper Performance-Floor	Viper Performance
Martin MAC Viper Profile	Viper Profile
Martin MAC Viper Profile-Floor	Viper Profile-Floor
Martin Mac Aura XB	Aura XB
Martin Mac Aura XB-Floor	Aura XB-Floor

This command will present a worksheet that lists all the Instrument Type values in the document and all other Instrument Type values that you may have entered from other Vectorworks drawings. This list never goes away; it just keeps growing as you use different instrument types in different plots. The only way to save your edits to this list, is to use the command below.

Save Short Inst Name List

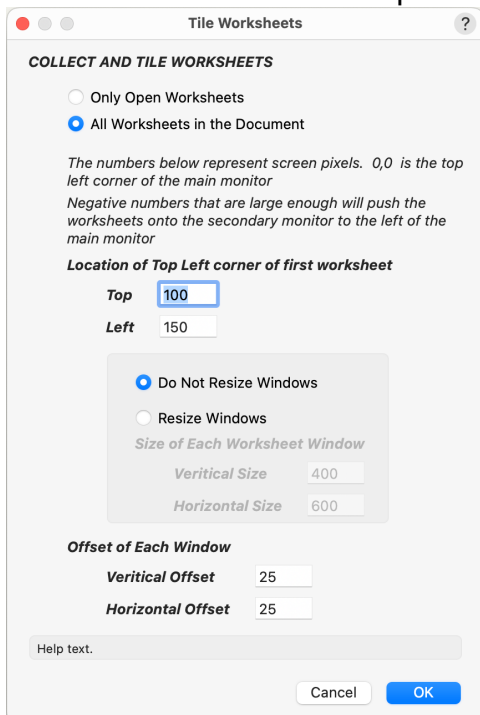
This command will save the values entered into the above worksheet.

Open all worksheets

This command will open all the worksheets in the document.

Tile Worksheets

This command will tile the open worksheets in a way that can be specified by the user



The 'Tile Worksheets' dialog box has the following options and settings:

- COLLECT AND TILE WORKSHEETS**
 - ☐ Only Open Worksheets
 - ☒ All Worksheets in the Document
- The numbers below represent screen pixels. 0,0 is the top left corner of the main monitor

Negative numbers that are large enough will push the worksheets onto the secondary monitor to the left of the main monitor
- Location of Top Left corner of first worksheet**
 - Top:
 - Left:
- Do Not Resize Windows** (selected)
 - ☐ Do Not Resize Windows
 - ☐ Resize Windows
- Size of Each Worksheet Window**
 - Vertical Size:
 - Horizontal Size:
- Offset of Each Window**
 - Vertical Offset:
 - Horizontal Offset:
- Buttons: Cancel, OK

Sort Worksheet Cells

Currently, Vectorworks can only sort database worksheets rows, rows that have decimal numbering, e.g. 2.1, 2.2, 2.3. This command will allow you to sort worksheet cells that are not database cells.

Sort Worksheet Cells

Currently, Vectorworks has no command to sort selected worksheet cells that are not part of a database row (14.1, 14.2, 14.3 etc). This command will sort up selected worksheet cells by a user selected column.

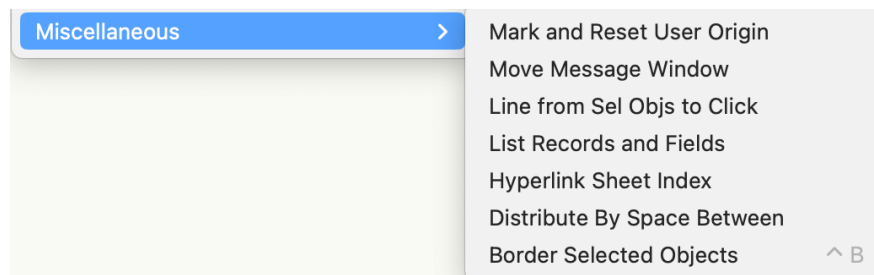
Close All Visible Worksheets

Does what it says.

Clear Top Database Sort

This command will clear all the sort settings of the top, open database worksheet.

Miscellaneous



Mark and Reset User Origin

Sometimes the user origin is moved away from the document origin, and this can cause some commands to behave badly. This command will mark where the current user origin is, and then move the user origin to the location of the document origin. You can use the mark that is placed to return the user origin if you so desire.

Move Message Window

Sometimes the message window shows up in the wrong place and the macro that is running will not let you move it out of the way. When the offending macro completes the message window disappears. This macro just puts up a message window for you to move and then close, and that position will be used for all the macros that follow.

Line from Sel Objs to Click

This command will draw a line from all visible selected objects to a user click. The lines will be placed on the active layer.

List Records and Fields

This command will create a worksheet that lists all the records and their fields that are attached to the first selected object.

Hyperlink Sheet Index

This command will create a text object of hyperlinks to each sheet layer.

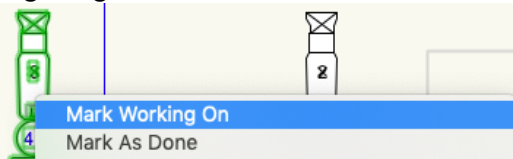
Border Selected Objects

This command will draw a border around each of the visible selected objects. The borders will be drawn on the bounding box of each object.

Object Context Menu Commands (right click on an object)

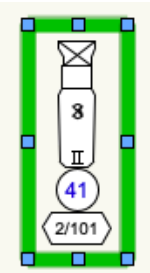
ALD Commands

This is a selection of commands that simplify the marking of the plot during focus. During assisting Clifton Taylor after a long break between ALD gigs, I discovered that I got frustrated with wrestling with the ½ inch scale plots, or squinting at ¼ in plots and marking them with highlighters as we foc used an electric. That evening I threw together these commands that would allow me to scroll along the plot on my Powerbook, marking lights as being worked on or completed and then being able to erase all the marks at the end of the focus session. Two commands are placed as object context menus that appear when the user right clicks on a Lighting Device, and two commands are placed in the AutoPlot menu to facilitate cleaning up.



Mark Working On

Right clicking on an object, and selecting this menu item will result in green square being placed around the selected object



Mark As Done

Right clicking on an object, and selecting this menu item will result in a red X being placed on top of the selected object. If a green "working on" square was around the object at the time it was clicked upon, that square will be erased.

