



# **Users Reference Guide**

onesmallstep.global

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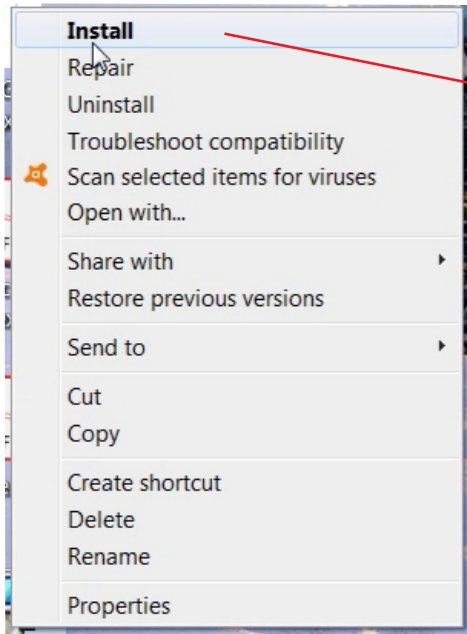
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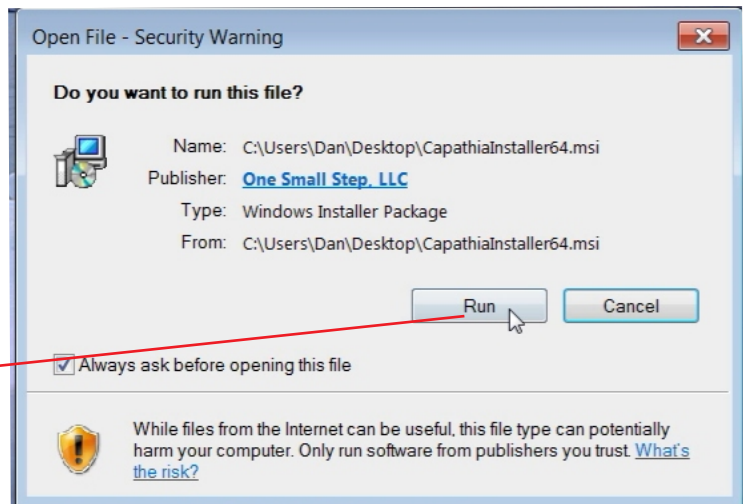
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# Carpathia Installation

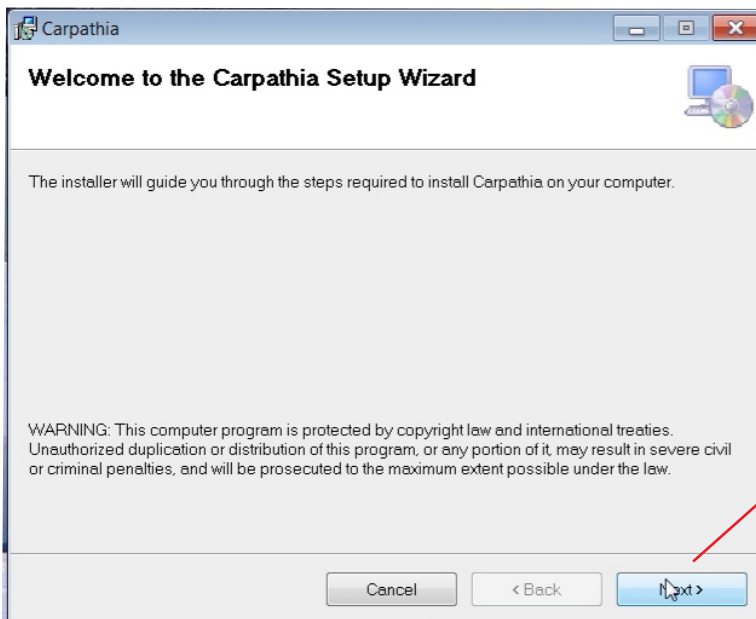
Download the Carpathiainstaller64.msi file to your computer. Right click on the installer file to begin the installation process.



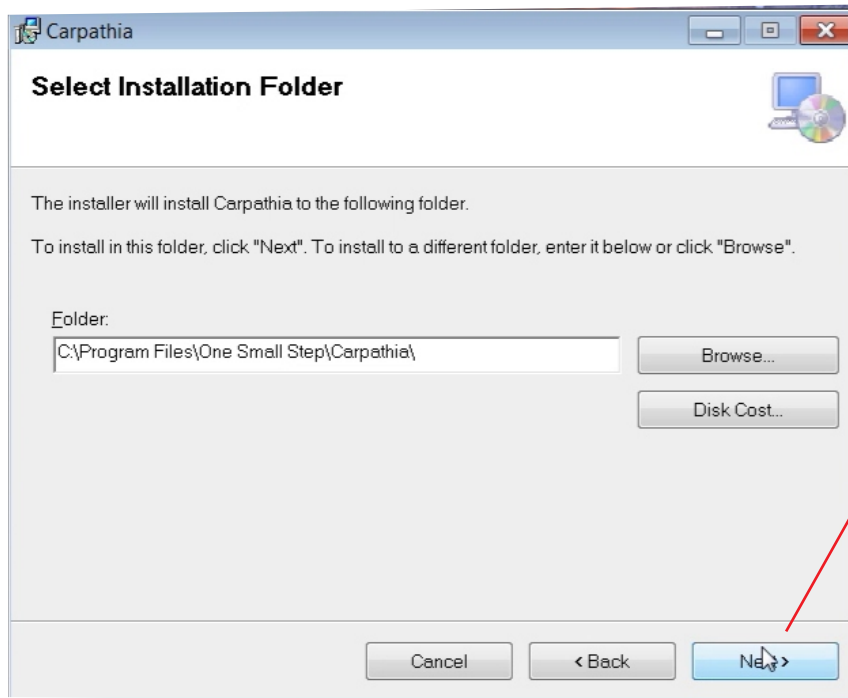
Click "Install"



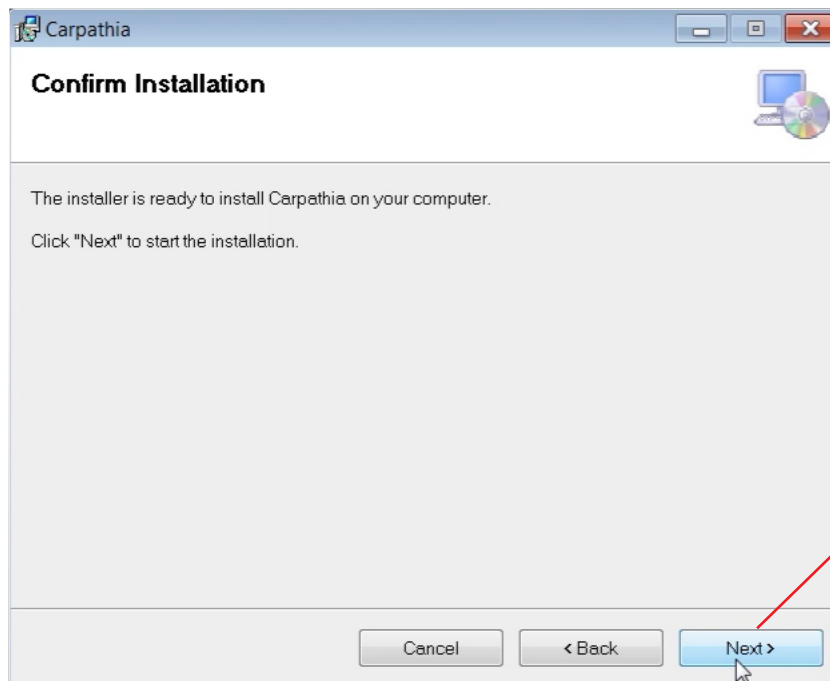
Click "Run"



Click "Next"

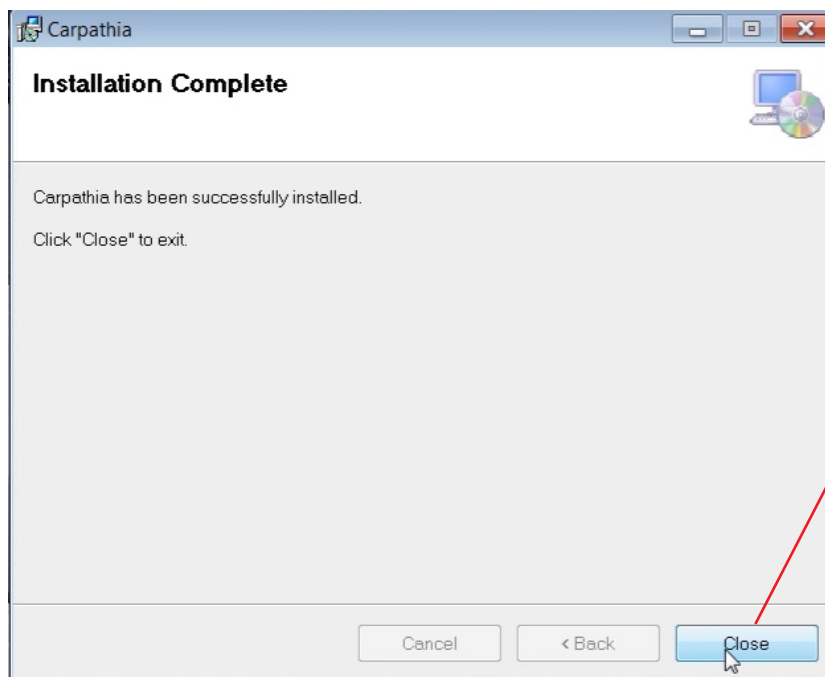
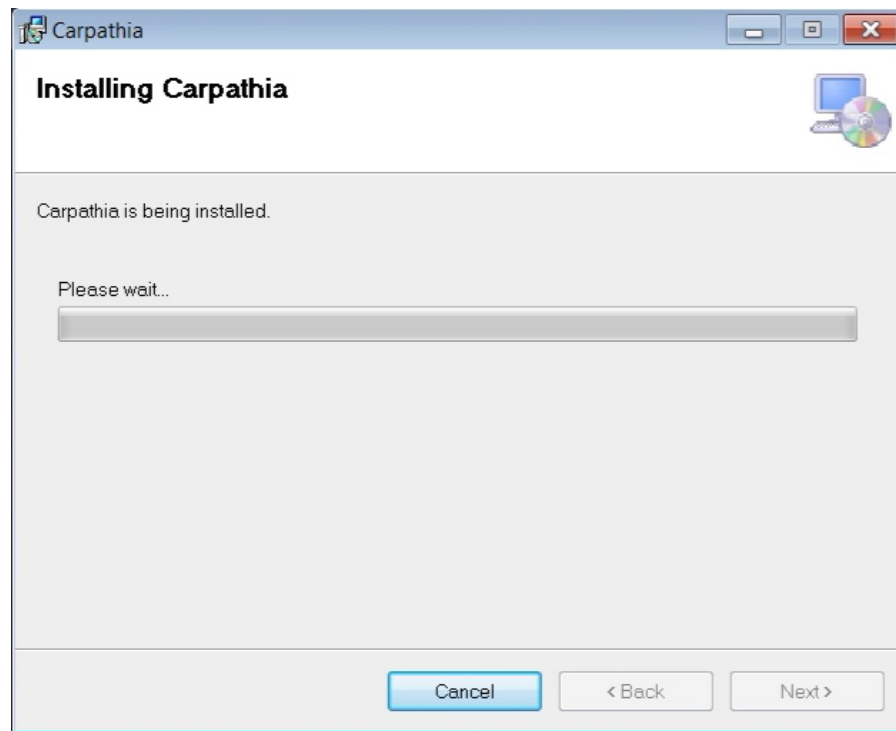


Click "Next"



Click "Next"

Depending on your computer this might take a minute to load



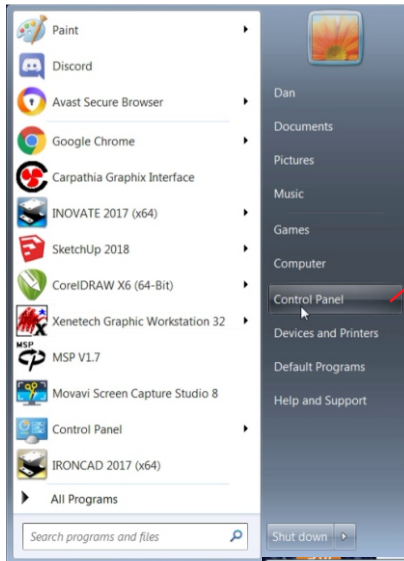
Click "Close"

Carpathia is now installed

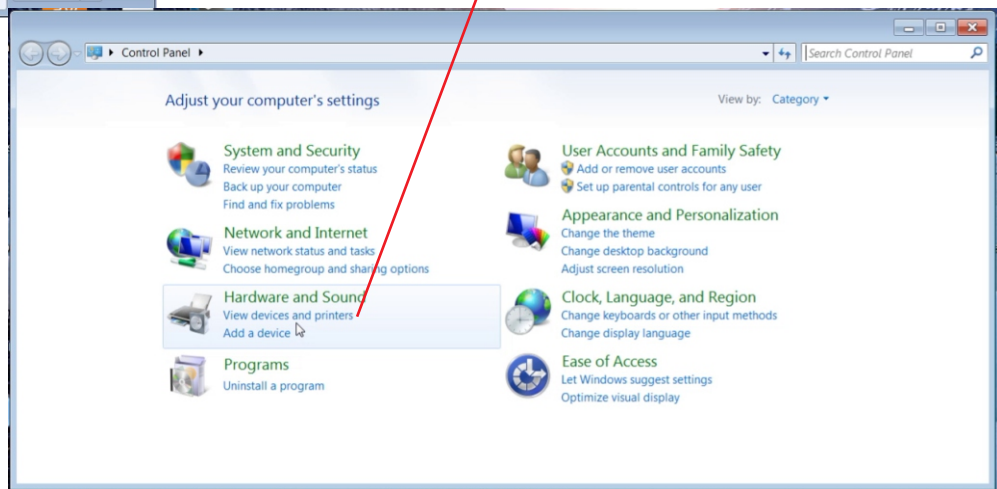
# Print Driver Installation

The Carpathia print driver (CPD) needs to be installed for printing from other programs to Carpathia.

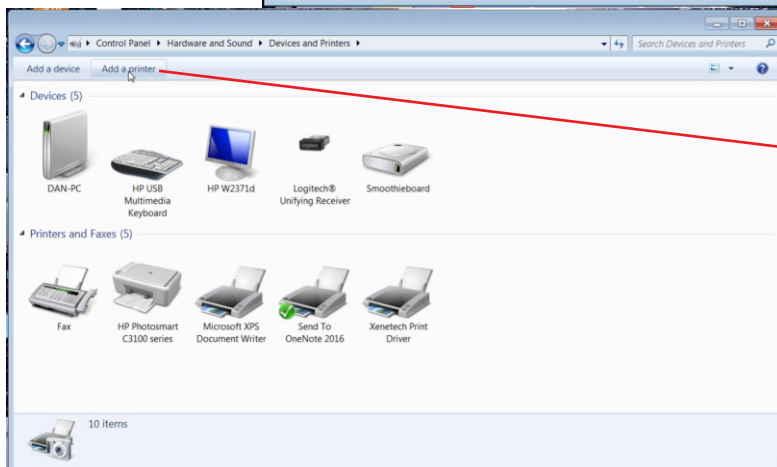
Depending on your computer one or two of the screens shown may be skipped.



Go to the "Control Panel" on your computer.

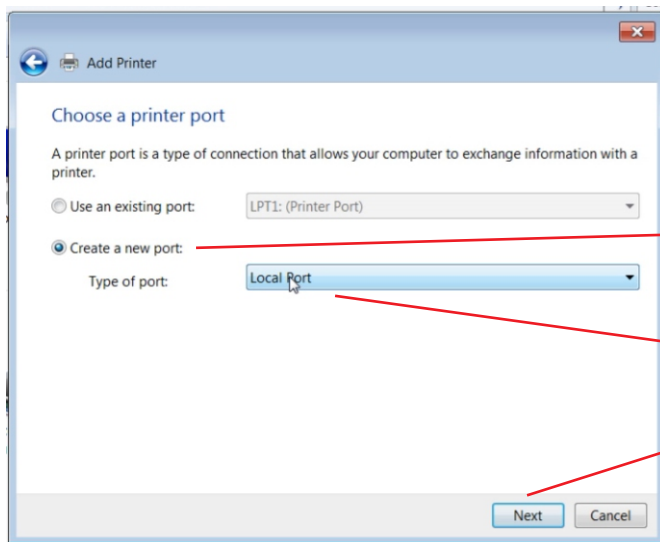
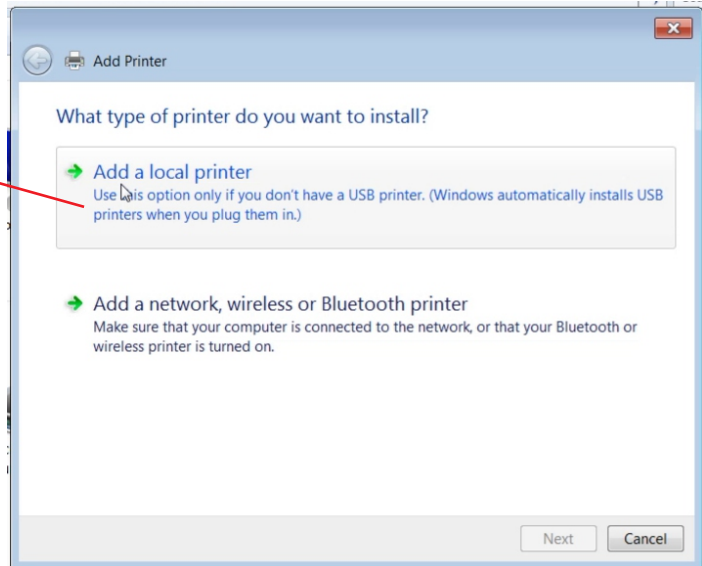


Go to "Devices and Printers"  
In the hardware and sound section



Select "Add Printer"

Select "Add local printer"



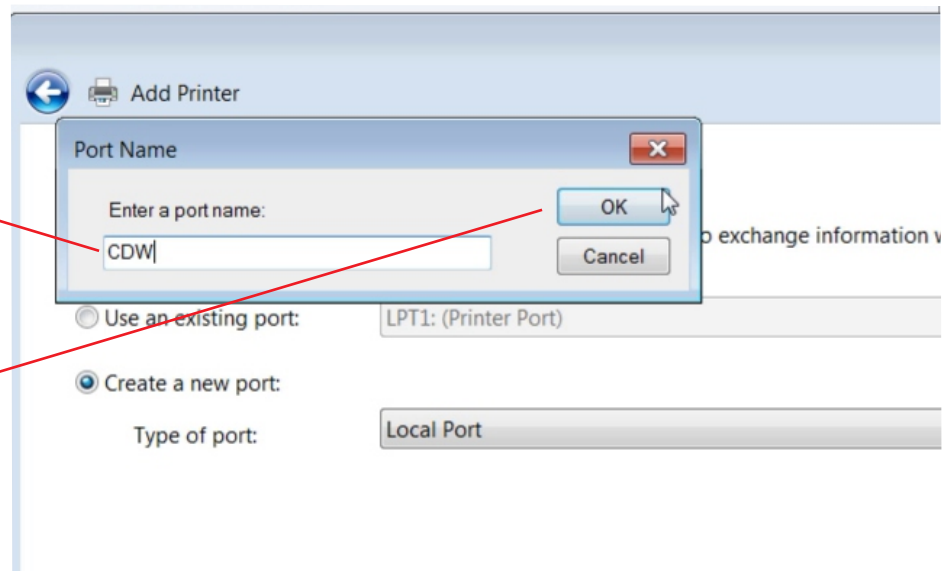
Select "Create a new port"

Select "Local Port"

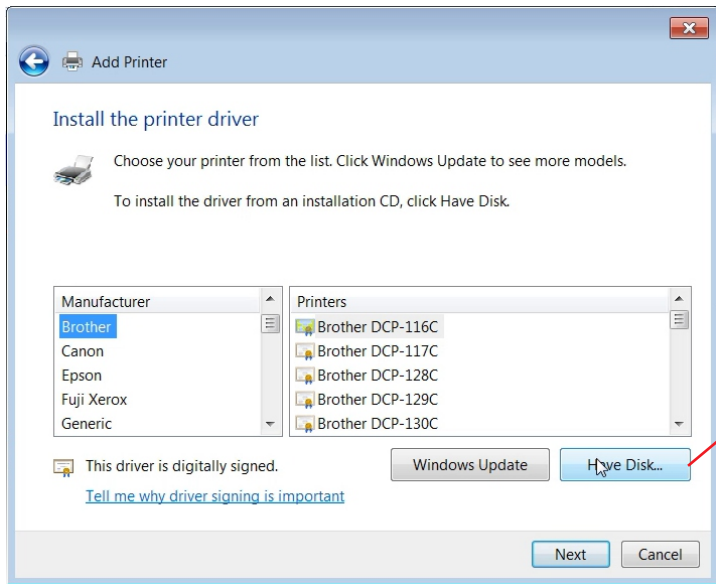
Click "Next"

Type in CDW

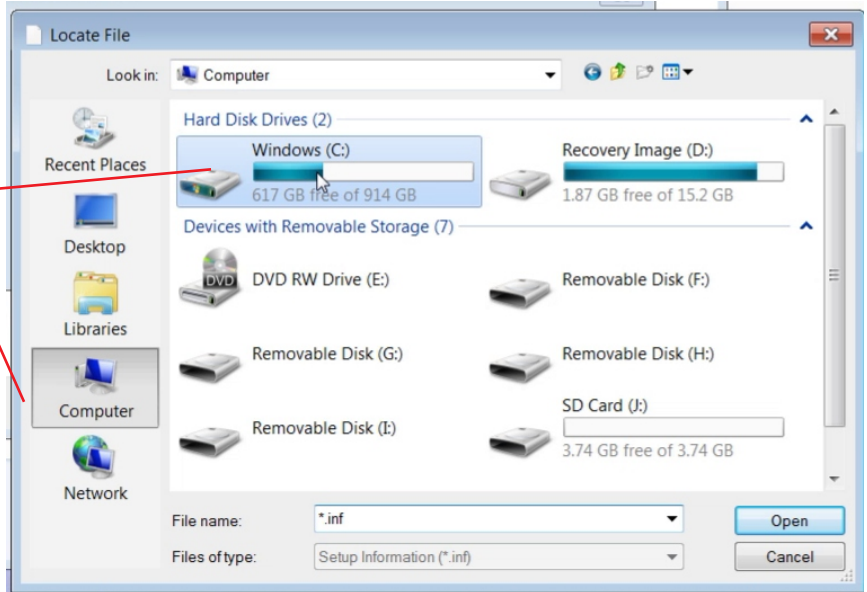
Click "OK"



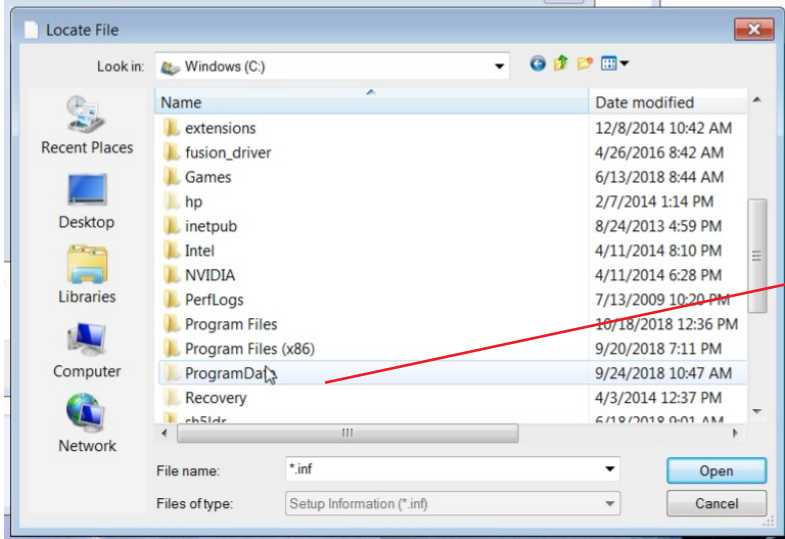




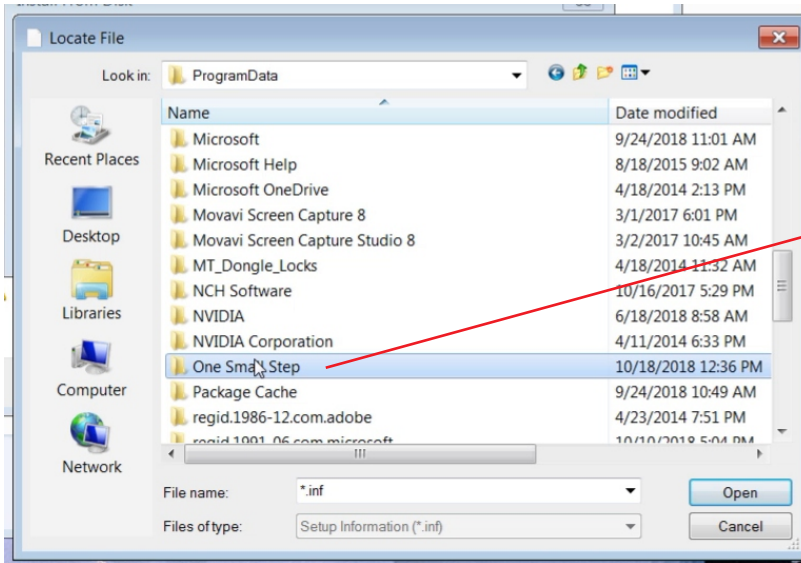
Click "Have Disk"



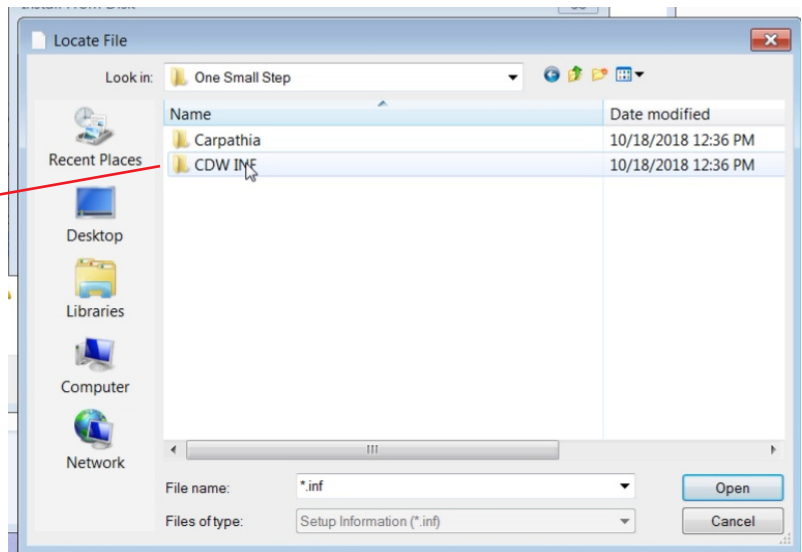
Select "Computer"  
Select "Windows (C:)"



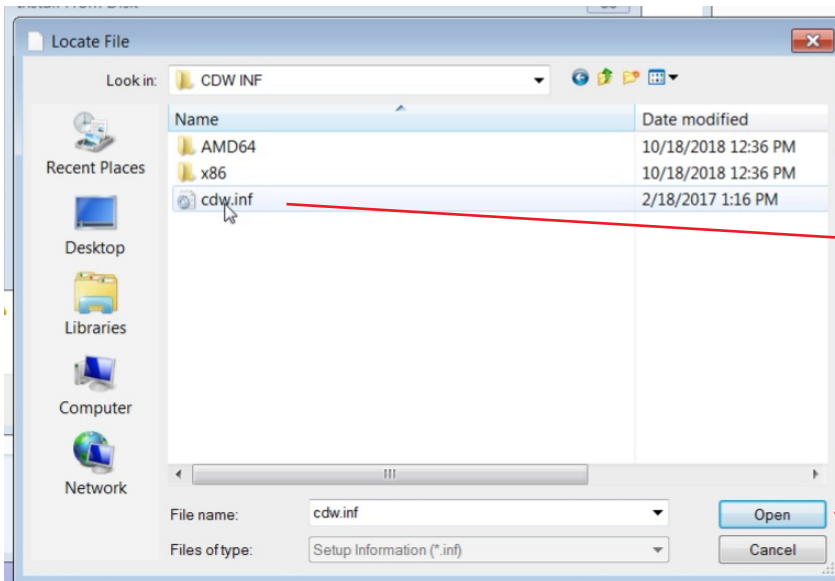
Double click the "Program Data" folder



Double click "One Small Step" folder

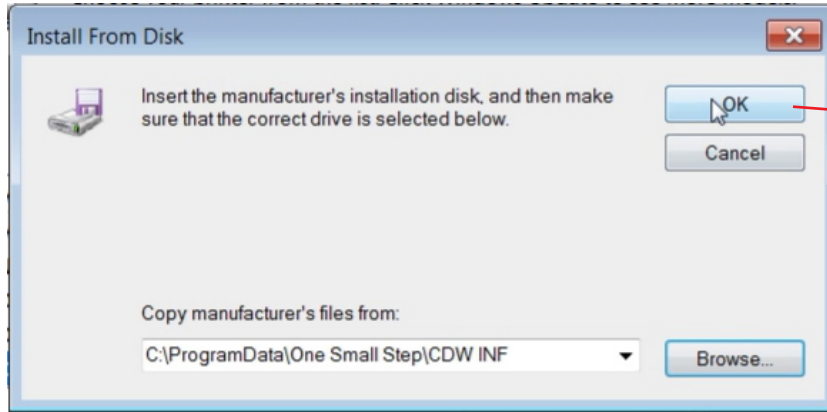


Double click "CDW INF" folder

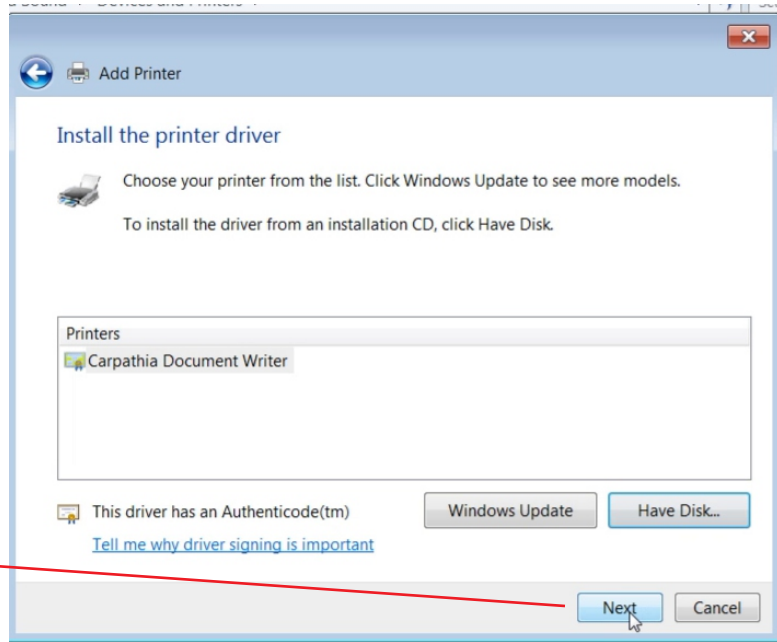


Single click "cdw.inf"

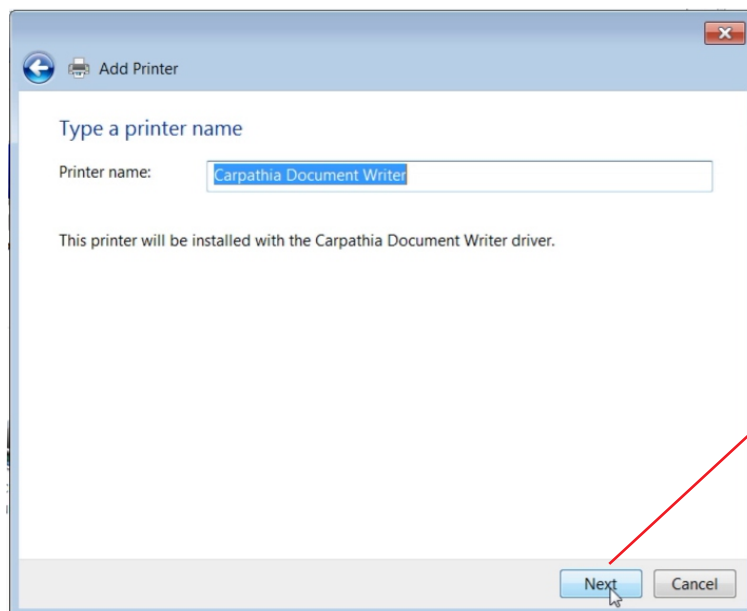
Click "Open"



Click "OK"



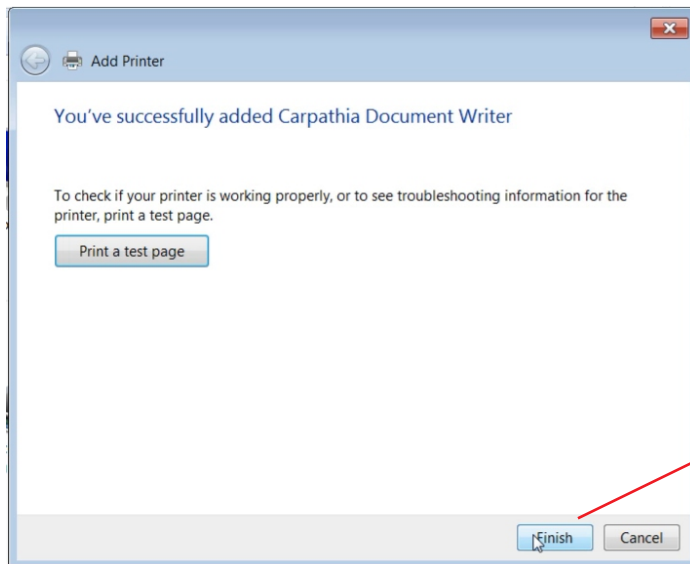
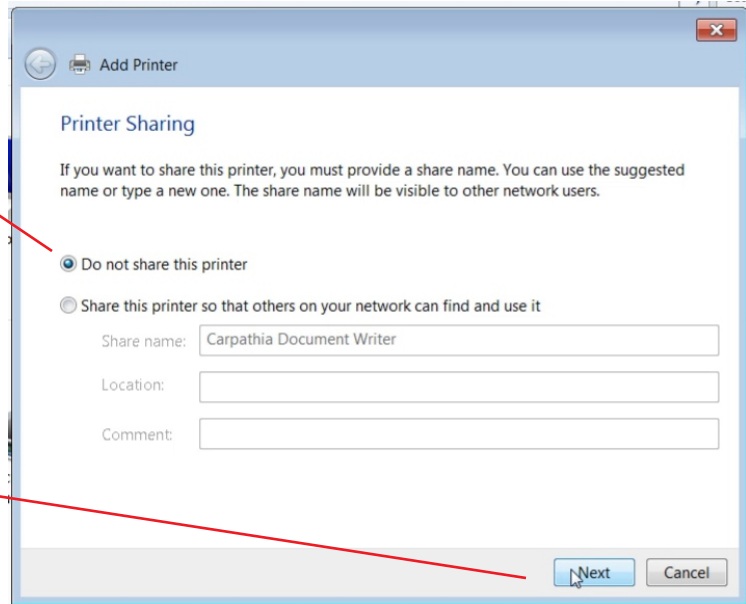
Click "Next"



Click "Next"

Select "Do not share printer"

Click "Next"



Click "Finish"

Carpathia Print Driver is now Installed

# Unlock

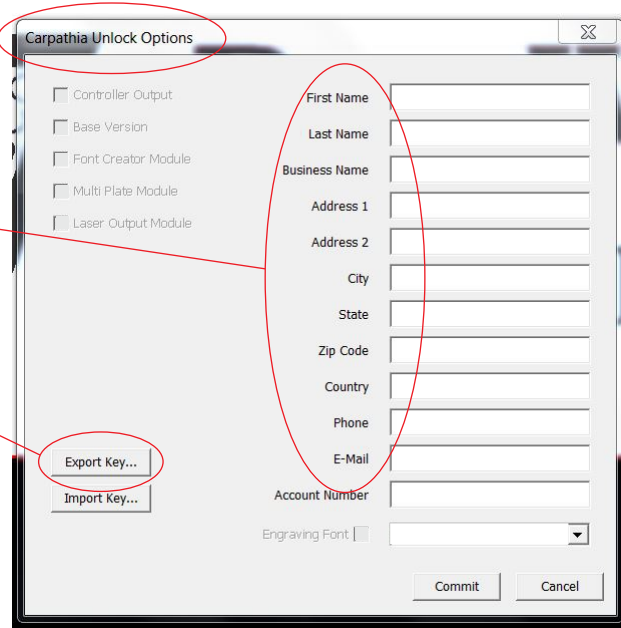
Before the software can be used for anything other than viewing CGI files it needs to be unlocked.

To unlock the CGI software go to “Help” on the menu bar, then select “Unlock”. This will bring up the Unlock dialogue.

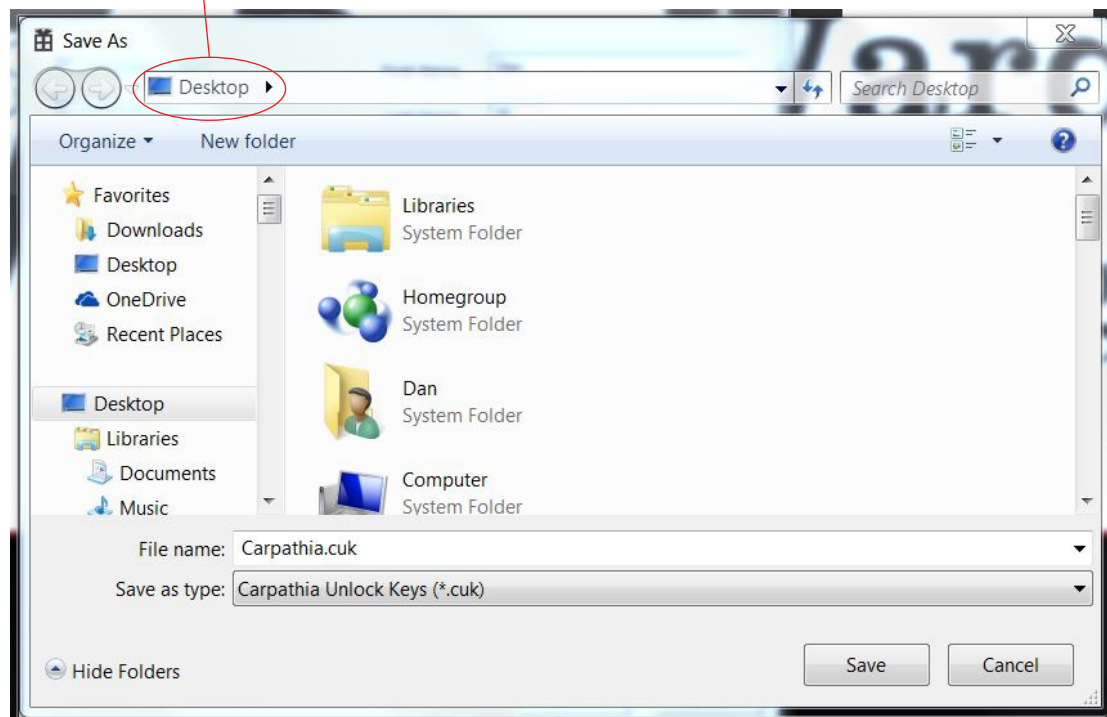
Fill in the boxes from First Name down to Email. If you already have an account number you can enter it, otherwise we will assign one to you.

Once the information is filled in select, the Export Key button.

The Unlocker will create a .cuk file. Save this file to a place easy to find like your desktop.



The image shows the 'Carpathia Unlock Options' dialog box. It features several checkboxes on the left: 'Controller Output', 'Base Version', 'Font Creator Module', 'Multi Plate Module', and 'Laser Output Module'. On the right, there are input fields for 'First Name', 'Last Name', 'Business Name', 'Address 1', 'Address 2', 'City', 'State', 'Zip Code', 'Country', 'Phone', and 'E-Mail'. Below these is an 'Account Number' field and an 'Engraving Font' dropdown menu. At the bottom, there are 'Export Key...' and 'Import Key...' buttons, and 'Commit' and 'Cancel' buttons.



The image shows a 'Save As' dialog box. The 'Desktop' folder is selected in the left-hand pane. The main area displays a list of folders: 'Libraries', 'Homegroup', 'Dan', and 'Computer'. The 'File name' field contains 'Carpathia.cuk' and the 'Save as type' dropdown is set to 'Carpathia Unlock Keys (\*.cuk)'. 'Save' and 'Cancel' buttons are at the bottom right.

Email the .cuk file to [unlock.onesmallstep.com](mailto:unlock.onesmallstep.com)

We will unlock the .cuk file and email it back to you. Save this file back to the same location you originally saved to. When Windows asks if you would like to replace the old file with the new one select "yes".

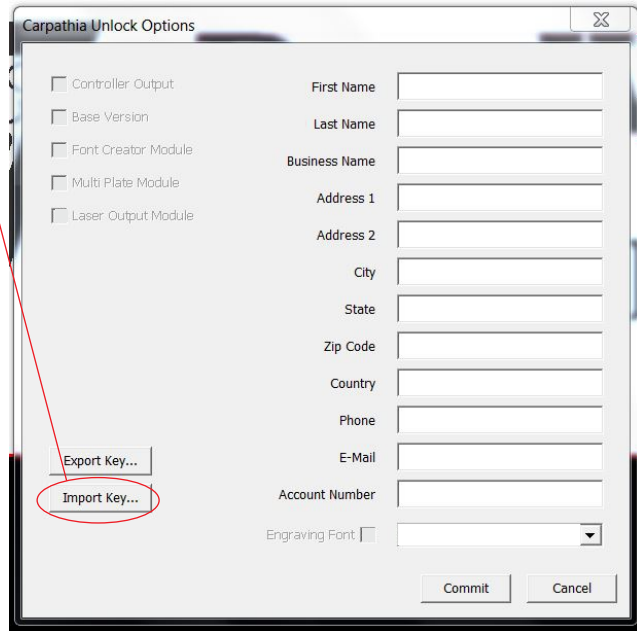
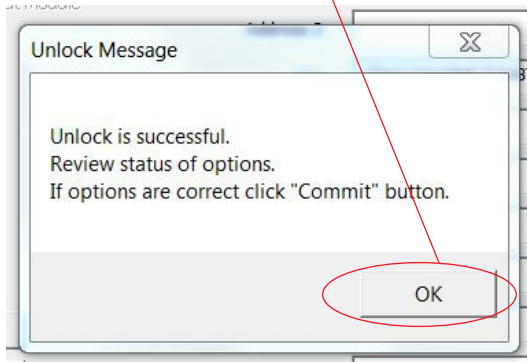
In Carpathia go back to "Help" on the menu bar then select "Unlock".

The Unlock dialogue will then open.

Select the Import Key button

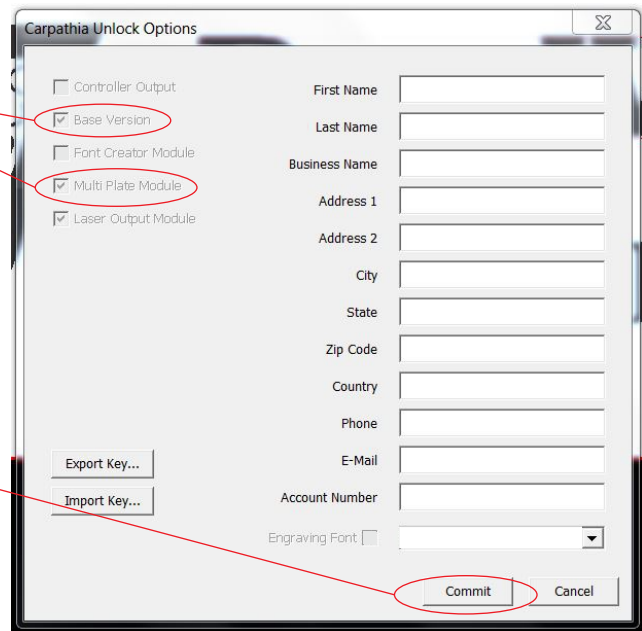
Select the .cuk file and select the "Open" button.

The Unlock Message box will appear. Select the OK button.



Now you can check to make sure the proper modules have been unlocked.

You can now select the Commit button and your software is unlocked.



# CGI Modules

**Printer/Viewer** - Free to download and install. Anyone can print CGI files and view them.

**Base Module** - Create new files, Manipulation of objects, and true type fonts, save files, print output, create graphics, import graphics.

**Engraving Fonts Module** - Allows use of purchased engraving fonts, ability to adjust and save kerning files, ability to create fonts.

**Mass Production Module** - Text Merge, multiple plate, grid cutout, and sort/optimize

**Controller Interface Module** - Live interface screen, comes with purchase of any rotary system or controller.

**2D barcode Module** - Create Data Matrix and QR codes quickly and easily. These codes are designed to easily work with serialization and text merge.

**Job Command Module** - Allows you to create templates that include command lines which allow you automate functions.

**Data File Module** - Rather than first creating a serial number database then using it to populate your engraving jobs, you can use the serialization feature to create plates and save any desired fields to a database.



# Printer/Viewer Module



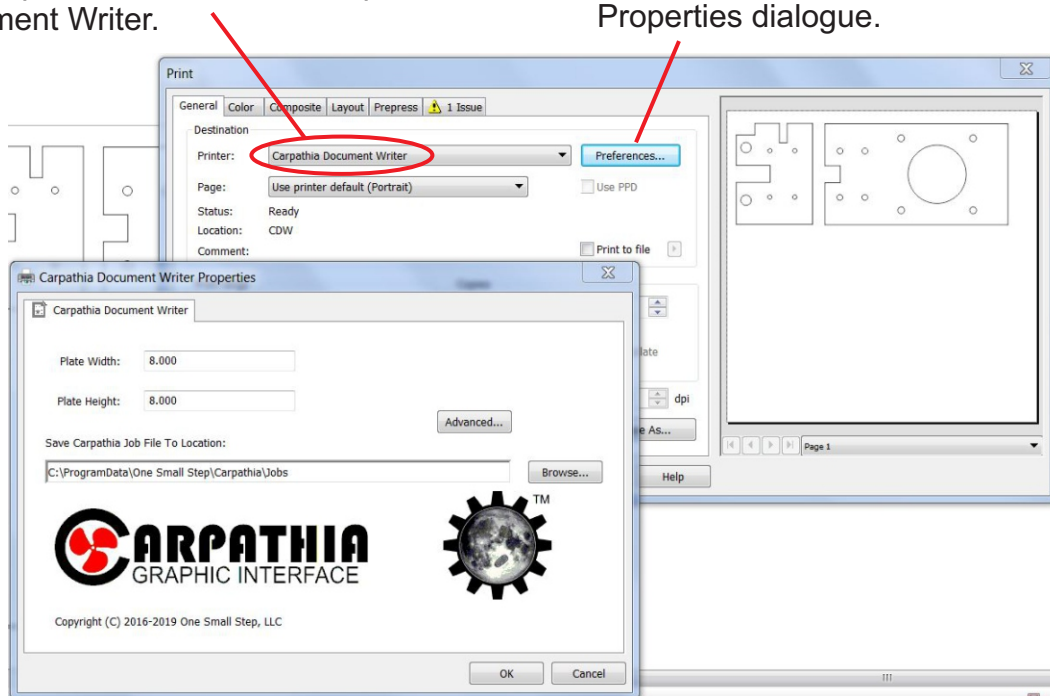
# Printer/Viewer Module

Free to download and install. Create a CGI file from any program that has print capabilities, like CorelDraw, Autocad, Adobe, even programs like Excel and Word. This is the foundation in which all other modules are based.

Create graphics in another program then print a .cgi file. If you have a customer that has a specific file possibly in a program you do not have they can download the CGI printer viewer and create a .cgi file.

In the print dialogue of the software you wish to print from select the Carpathia Document Writer.

Click the preferences/settings button to open the Carpathia Document Writer Properties dialogue.



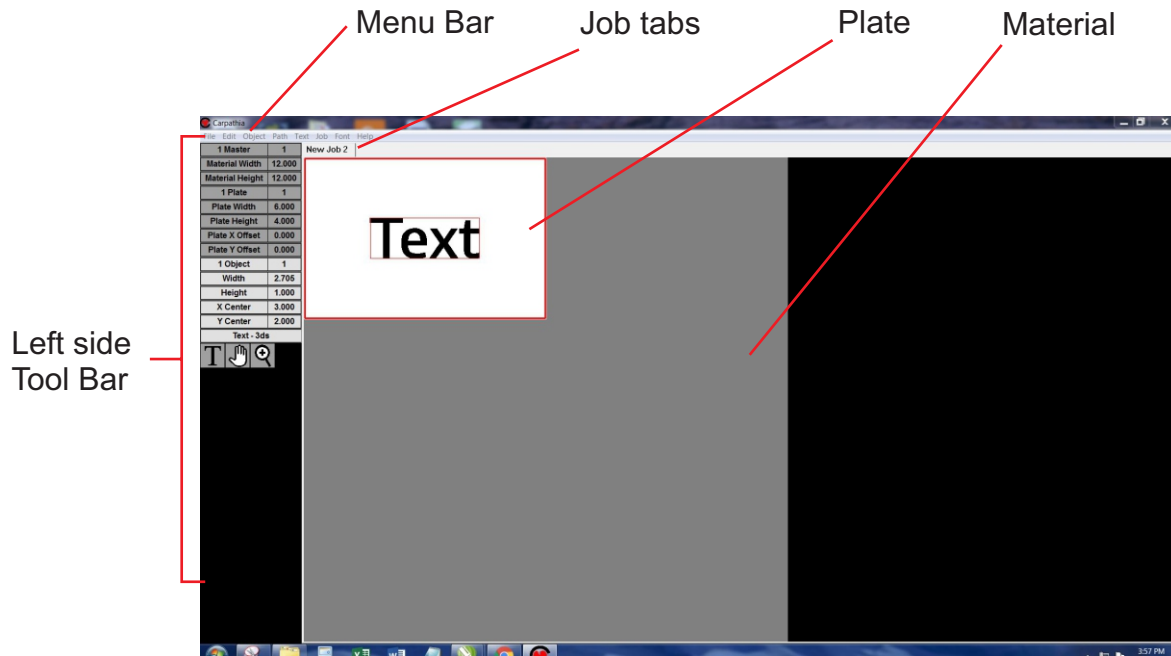
In the CDW properties dialogue, match the Plate Width and Height to the page size in the software you are printing from.

Once printed, it can then be opened in Carpathia for viewing. Open Carpathia, select "File" then "Open" and your new file will be in the "Jobs" folder. If you have the Base Module you will be able to edit the job.



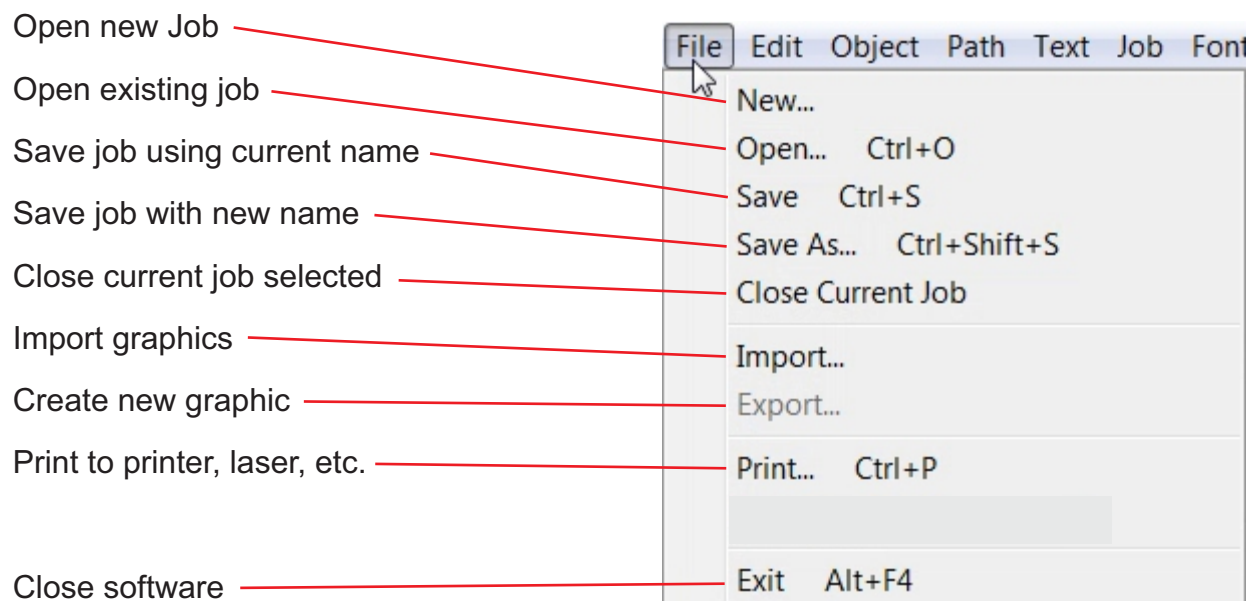
# Base Module

# Carpathia Layout



## Menus

### File Menu



# Edit menu

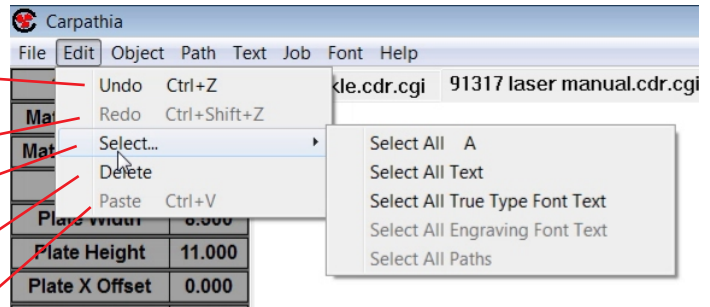
Undo up to 100 previous changes

Redo up to 100 previous changes

Select all, or by type of objects

Delete currently selected object

Paste from clipboard (not turned on yet)



# Object menu

Group objects

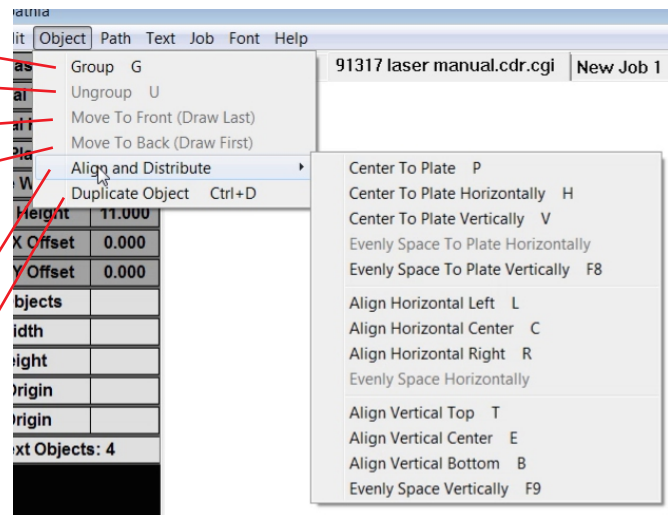
Ungroup objects

Move object in front of others

Move object behind others

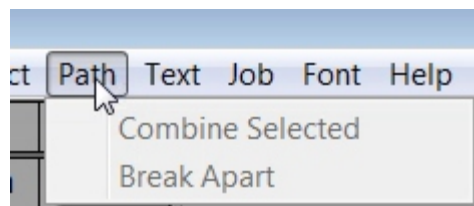
Align and distribute by plate or selection

Duplicate an object



# Path menu

Combine and Break Apart vector objects  
This does not yet work with text objects

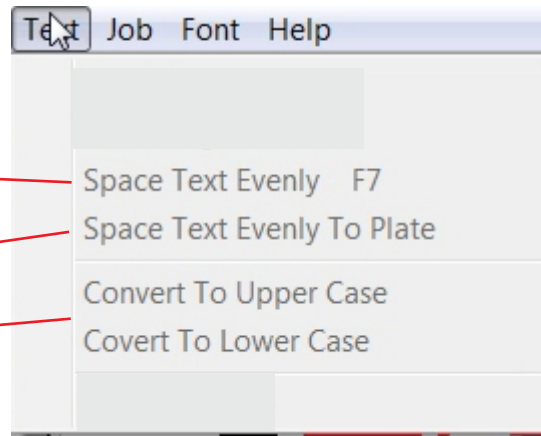


## Text menu

Space text by baseline within the selection

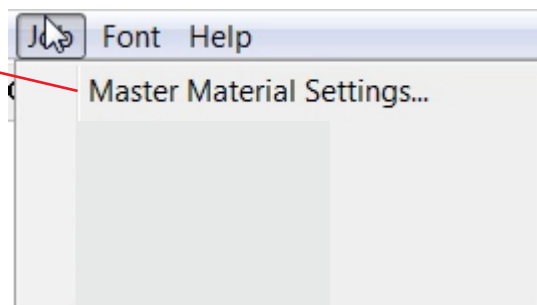
Space text by baseline evenly from the top margin of the plate to the bottom margin of the plate.

Change the case of selected text



## Job menu

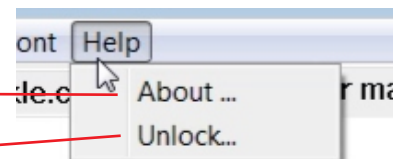
Open the master material settings dialogue also can be opened from toolbar



## Help menu

See which version of Carpathia you have in the "About" dialogue

Open the Unlock Dialogue



# Left Side Tool Bar

## Material and Plate settings

Number of masters and which master is being viewed. Click to open master materials dialogue

Material width and height

Number of plates and which plate is selected. Click to open the plate margins dialogue

Plate dimensions. Click to open master materials dialogue.

Currently shows offset for selected plate.

1 Master	1
Material Width	3.000
Material Height	2.000
1 Plate	1
Plate Width	3.000
Plate Height	2.000
Plate X Offset	0.000
Plate Y Offset	0.000

## Object settings

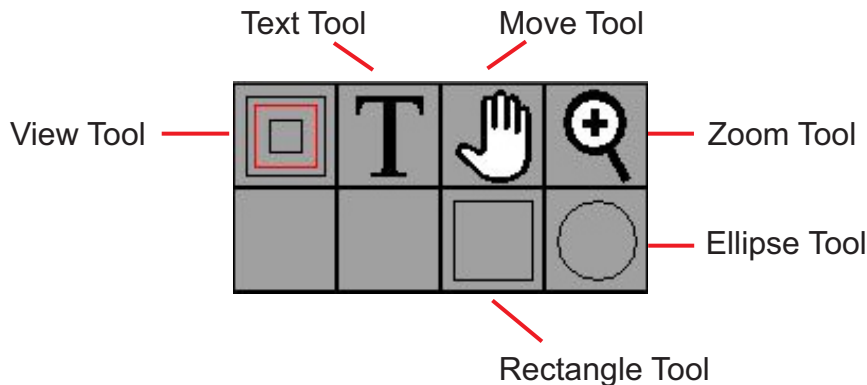
Number of objects in job and how many are selected. Click to open object properties dialogue.

Width and height of object selected. Click to open object properties dialogue.

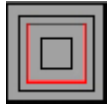
X and Y origin show the object origin and the location of the origin. Click to open object properties dialogue.

Properties button shows the type of object, or objects selected and how many. Click to open the corresponding dialogue. (more on properties in the next section)

14 Objects	11
Width	0.354
Height	0.101
X Left	1.163
Y Top	0.678
Text - Arial	



# Tool Functions



## View Tool

View tool allows you to toggle between material view, plate view, selection view, and zoom view. The current view is indicated by the red highlight. In zoom view it will be a yellow highlight.



## Text Tool

Clicking the text tool changes the cursor to the “text tool”. Click a location on the plate, then the text dialogue opens allowing you to type text. When finished typing a line of text, press “Enter”, this will close the dialogue. To type another line, press enter, to return to the normal cursor, either right click the mouse, or click on the text tool.



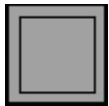
## Move Tool

First select the object or objects to move, then click the move tool once, the hand icon will appear. Hold down the left click to move the objects. You do not have to be over the objects to move them. Release the left click when you have the object where you want it, then either right click or left click the move tool to exit.



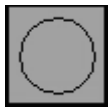
## Zoom Tool

Right click the zoom tool then hold down the right click to drag a box for the zoom view. Once you release the right click the view will zoom to your selection. Right click the zoom tool, or left click anywhere to exit the zoom tool. Use either the View Tool or F11 to toggle between views. When you are in the plate view you can right click to eliminate the yellow bounded zoom area.



## Rectangle Tool

Left click the tool button then hold down the left click to drag a rectangle. Release the left click then you can drag another rectangle. Left click the tool button or right click anywhere to exit the tool. If you hold down the ctrl button while dragging a rectangle it will force it to be a square.



## Ellipse Tool

Left click the tool button then hold down the left click to drag an ellipse. Release the left click then you can drag another ellipse. Left click the tool button or right click anywhere to exit the tool. If you hold down the ctrl button while dragging an ellipse it will force it to be a circle.

# Quick Key Shortcuts

Open	Ctrl+O
Save	Ctrl+S
Save As	Ctrl+Shift+S
Print	Ctrl+P
Exit	Alt+F4
Undo	Ctrl+Z
Redo	Ctrl+Shift+Z
Paste	Ctrl+V
Select All	A
Group	G
Ungroup	U
Duplicate Object	Ctrl+D
Center to Plate	P
Center to Plate Horizontally	H
Center to Plate Vertically	V
Evenly Space to Plate Vertically	F8
Align Horizontal Left	L
Align Horizontal Center	C
Align Horizontal Right	R
Align Vertical Top	T
Align Vertical Center	E
Align Vertical Bottom	B
Evenly space Vertically	F9
Space text evenly	F7
Toggle view	F11
Wireframe view/2d code view	Ctrl+W
File export	Ctrl+E
File import	Ctrl+i
Move object order forward	Ctrl+F
Move object order back	Ctrl+B

Holding down shift or ctrl while moving an object with the arrow keys changes the nudge amount providing more control.

When aligning objects hold down ctrl+alt and select the object you want to be dominant. It will show a green selection box.



# Master Material Settings dialogue

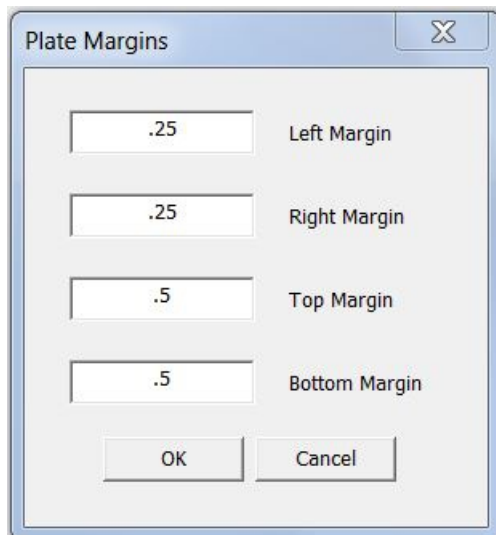
Click the “File” tab on the menu bar then click “New” to open a new job. The Master Material Settings dialogue will appear.

## Plate Size

There is a place to enter the size of your plate, and the Plate Margins button. The other fields in this dialogue only become active when the Mass Production module is unlocked.



## Plate Margins



In this example we have set the margins to not allow objects to get within .25” of the left and right side of our plate. We have also set margins that will not allow objects to be any closer than .5” to the top and bottom of our plate. This will automatically apply to any objects created after we set these values. Any objects created before this was set will have different margins.

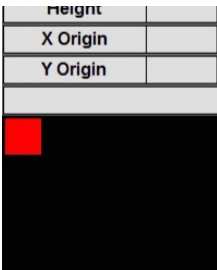
# Text

In this manual we refer to any font that is capable of being edited, by font style, point size, and content, as text. Technically fonts are not always text. There are fonts that allow graphics to be typed like hearts or smiley faces. Technically text is not always a font. Text can be converted to vector paths, or bitmaps, so it is still seen as text but it is no longer a font. To eliminate confusion in this section text must be a font. When we use the term text we are only referencing an editable font.

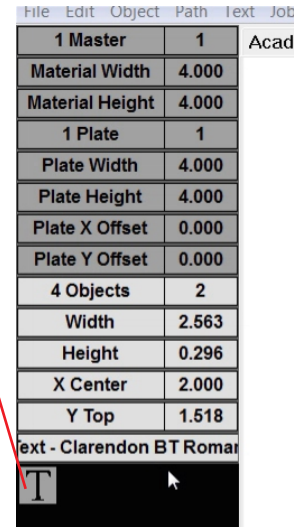
## Typing text in Carpathia

To type text, select the “Text Tool” on the tool bar.

If you hover over the button it lights green.



When you click the button it turns red and the pointer turns into the text cursor.



Move the text cursor to the area of the plate you wish to type text. The text will center to the location you select. Single left click to select this location.

The Text Properties dialogue will open.

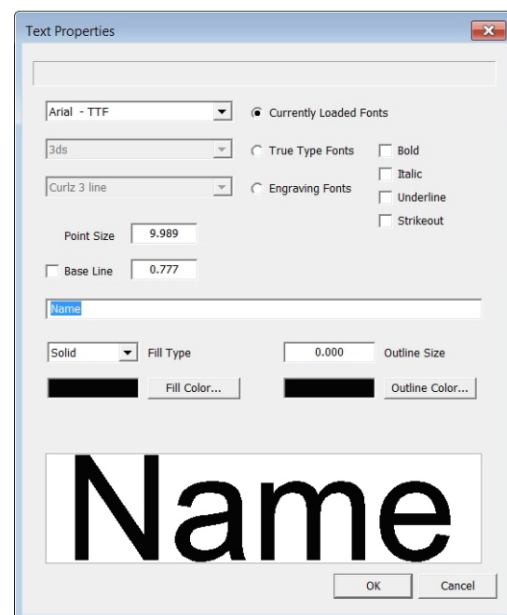
The text dialogue is automatically selected so you can begin typing immediately.

We suggest that you select the point size, and font before selecting “OK”

If you select “OK” without typing the word text will appear on your screen with the point size and font selected.

If you select “Cancel” at any time the dialogue will close without affecting the job.

To exit the text mode and get the pointer back either select the Text Tool button or right click the mouse.



# Text properties dialogue

There are two ways to access the text properties dialogue. The first is used to modify existing text. Select the text on your plate then click the Properties button (Explained on next page). If you have any objects other than text selected the text properties dialogue will not open. The second way is for creating new text. Select the “text tool” on the tool bar then with the text tool icon select the location on the plate to add text. This will open the text properties dialogue.

Once open you have control of the font type, point size, base line location, and editing.

The “currently loaded fonts” drop down menu contains any fonts that are currently used in your job even if those fonts are not currently selected.

The “true type fonts” drop down menu contains all of the true type fonts you have loaded on your computer.

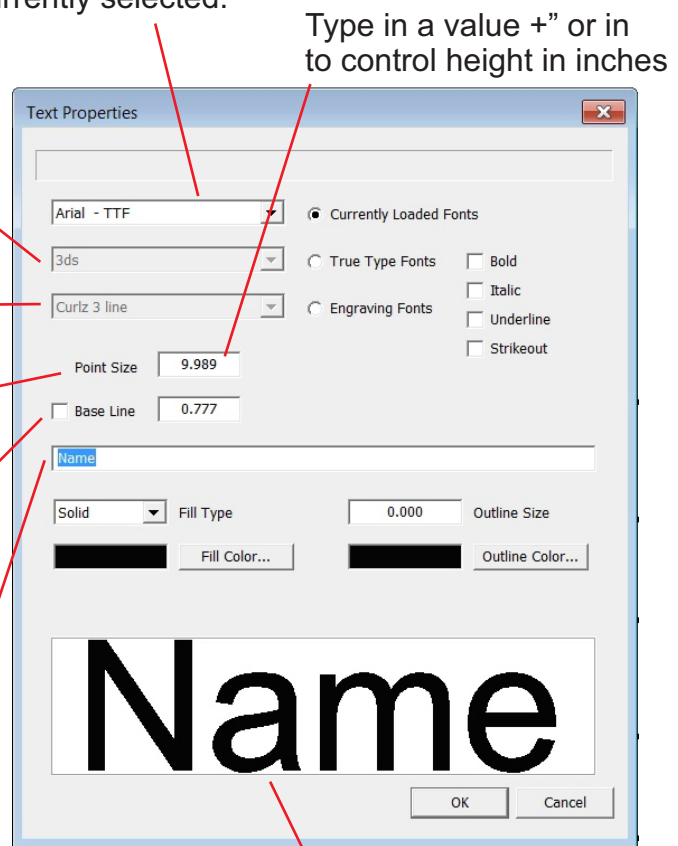
The “engraving fonts” drop down menu contains only the unlocked engraving fonts in Carpathia.

Point size not only controls the size of the font but always forces the proper aspect ratio even if that ratio has been changed through other manipulations.

Checking the “base line” dialogue not only allows you to type in the desired base line but when this is selected, any text that is merged into this line will merge to the baseline and not the center of the line of text.

The text entry box is where you edit or add text to an existing line.

The text window displays the text in the font you have selected.

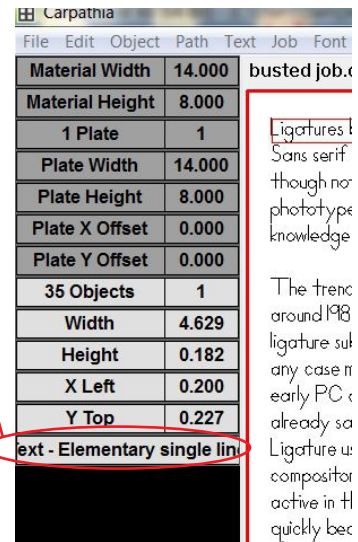


# Properties button

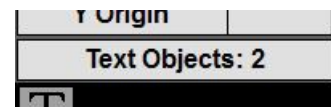
The Properties button becomes active when any object or multiple objects on the screen is selected.

**This dynamic button shows the type of object or objects selected, and when clicked opens the most specific control dialogue for that selection.**

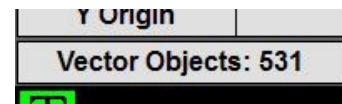
If a single line of text or a group of text that shares the same font is selected then the Properties button will indicate Text and the font type. [\(click will open text properties dialogue\)](#)



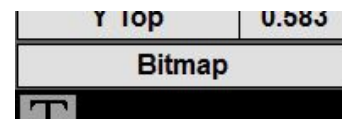
If you select text that has more than one font the Properties button will indicate how many text objects are selected but will not indicate the font type. [\(click will open Text Properties dialogue\)](#)



If any path/vector objects are selected the Properties button will read Vector Objects and display the number of objects. If text items are selected along with path/vector objects the same is true. [\(click will open the Vector Properties dialogue\)](#)



Any bmp, jpeg, or similar is printed to Carpathia as a bitmap. Currently there are no manipulations available. [\(click will open the Object Properties dialogue\)](#)

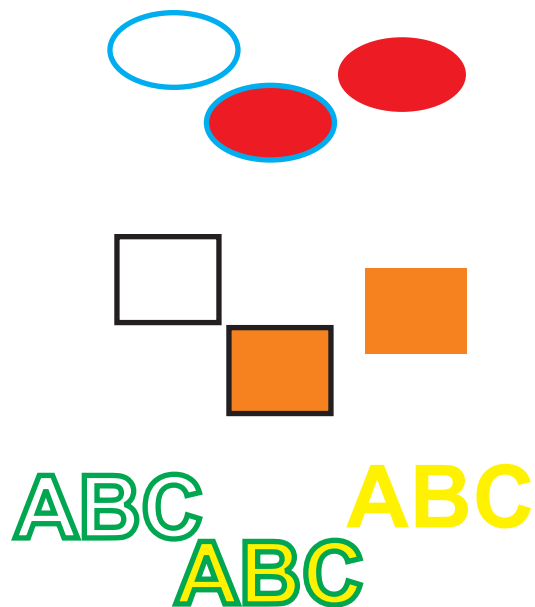
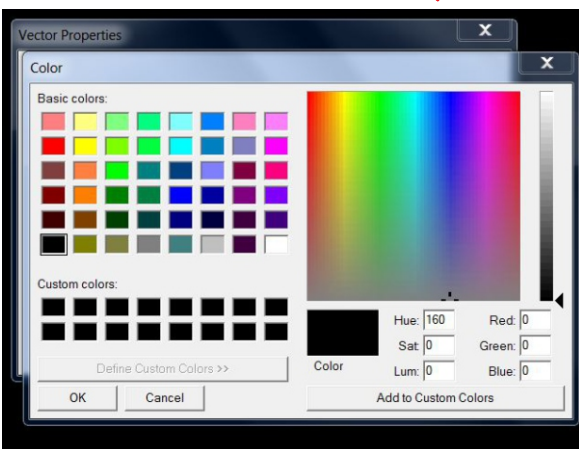
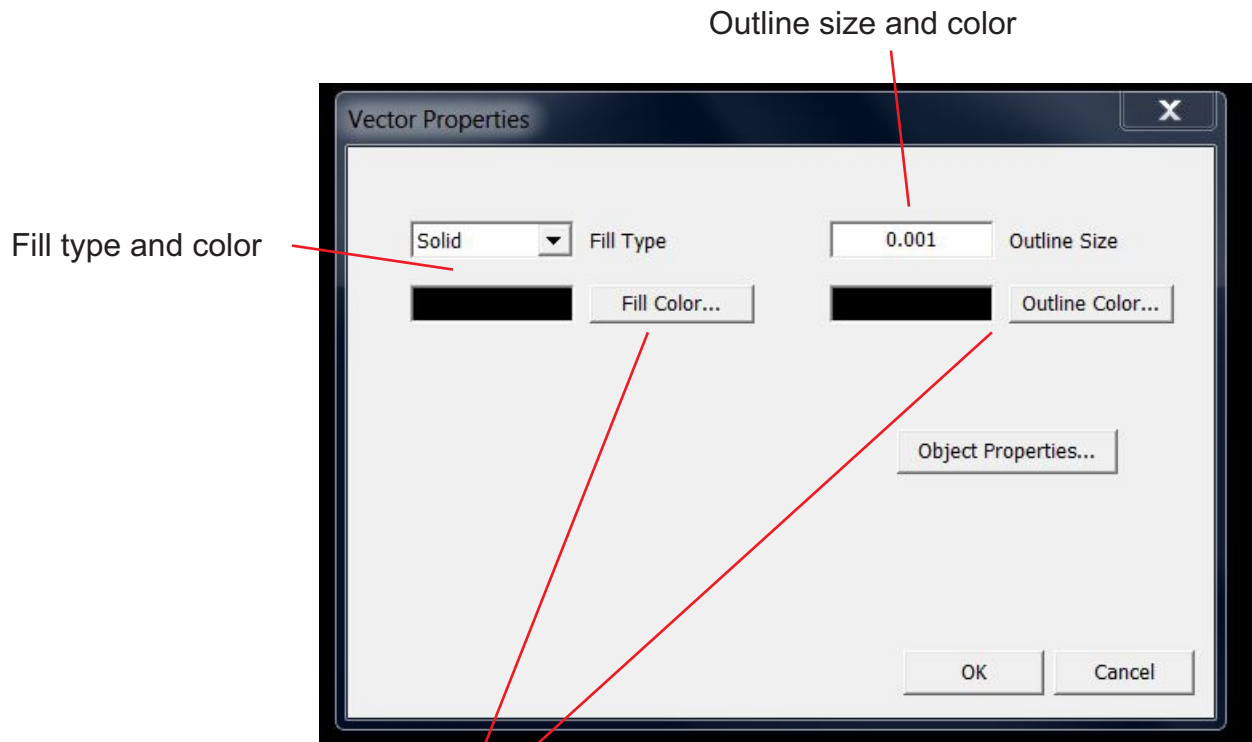


If your selection includes a bitmap along with any type of vector object, Mixed Objects will be displayed. [\(click will open the Object Properties dialogue\)](#)



# Vector Properties Dialogue

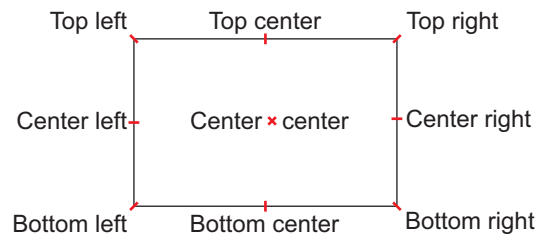
The Vector Properties dialogue allows you to control the outline and fill of vector/path objects. Choose between Solid and no fill. If you have a solid fill you can select the fill color. Enter the outline size you desire. If 0.00 is selected there will be no outline visible. With an outline size of .001 or larger you can select an outline color.



# Object Properties Dialogue

All objects have a size, location, and margins. These variables are controlled in the Object Properties dialogue.

An important part of selecting an X and Y location for an object is determining what part of the object are you referencing. There are 9 different origin locations.



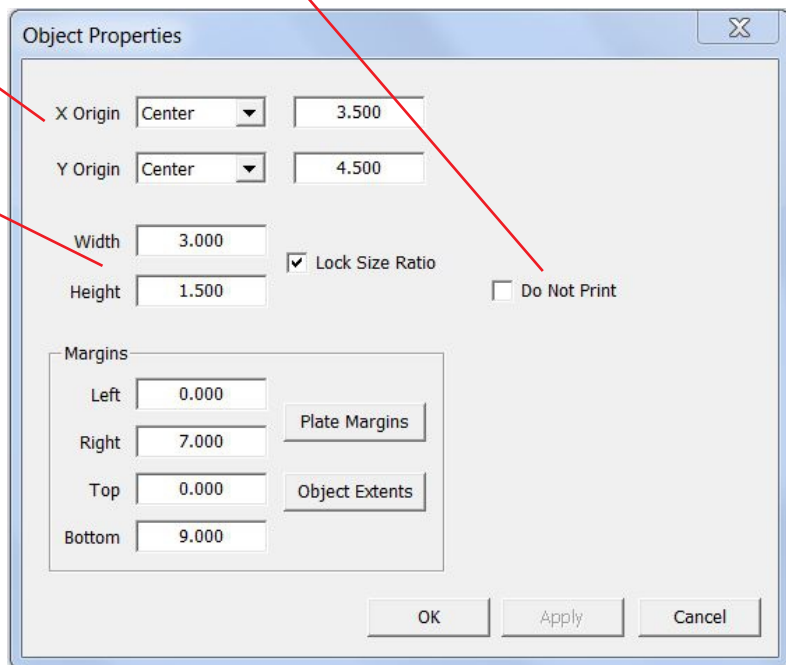
Select the object origin that best allows you to properly position your object. For typical plaque, name and data plate layouts we recommend center, center.

Set any object to not print, it will still be part of your job layout but will not be sent to printer, laser, etc.

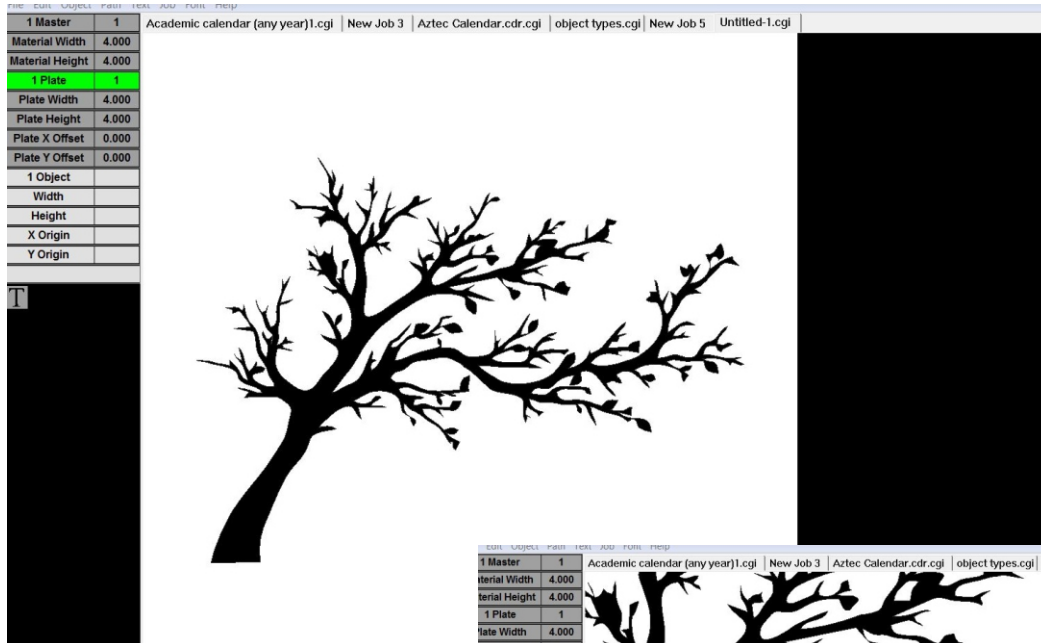
The width and height of the object can be changed independently or with the “Lock Size Ratio” box selected change either the height or width and the other will be changed automatically keeping the proper size ratio.

Margins restrict the placement of objects on the plate. To lock an object in place, click the “Object Extents” button. This will automatically extend the margins from left, right, top and bottom to the edges of the object. To unlock the object click the “Plate Margins” button and it will assume the margins

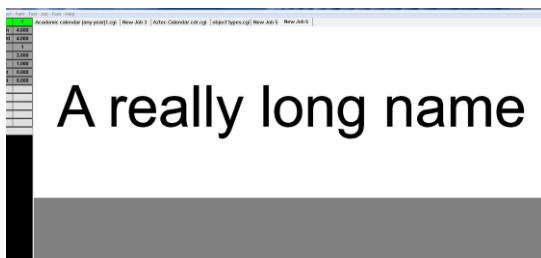
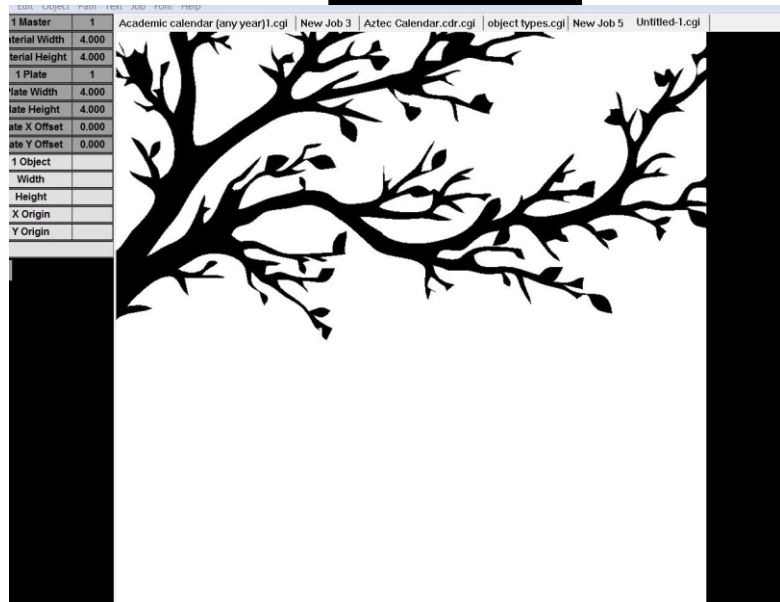
you have entered in the “Plate Margins” dialogue. You can manually assign margins that allow your object to be placed in any location, even off the plate. This can be used in a case in which you have a graphic, like a tree that you want to position so some of the branches are on the plate but most of the tree is not. You can assign margins beyond the plate dimensions and move the tree so only the part you want is on the plate. When you print from Carpathia only what is seen on the plate will print, the portions of the objects off the plate are cropped.



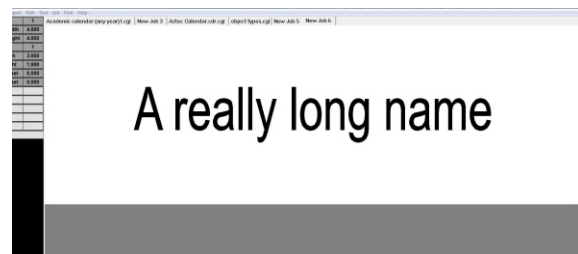
# Margins



Allow objects to hang off the plate by assigning negative numbers to the left and top or large numbers to the right and bottom than the plate size.



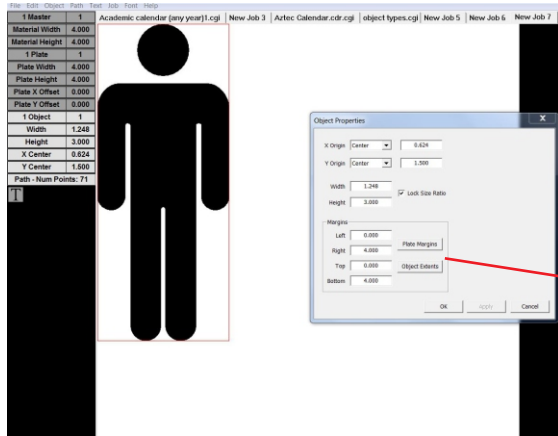
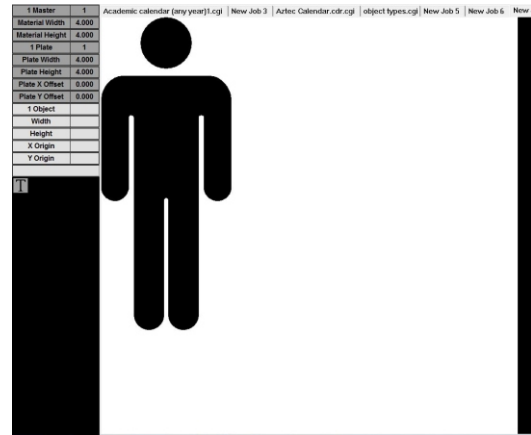
A 1"x 3" plate with 24 pt text no margins



A 1"x 3" plate with 24 pt text .5" margins left and right.

To adjust margins for an object you can use relative numbers

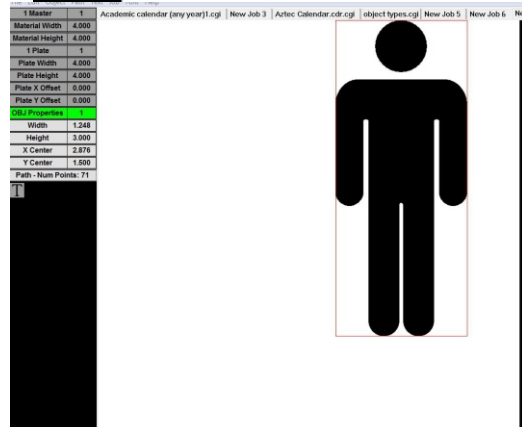
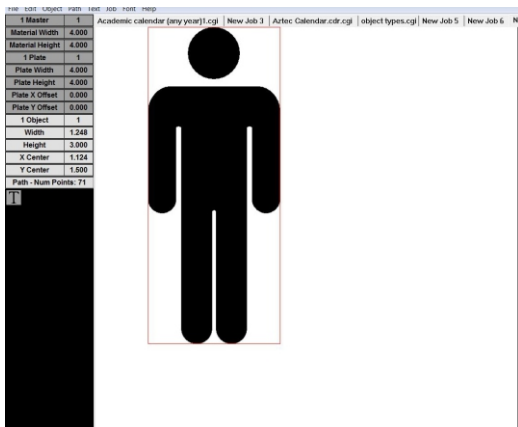
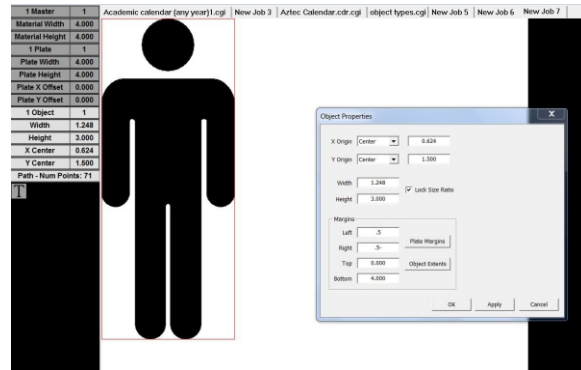
In this example a man graphic was imported to a 4"x 4" plate. The default margins for the plate are the plate extents. We can move the man to any edge of the plate.



With the man selected we can adjust the margins in the Object Properties dialogue.

In this example you can see the margins default to the plate size with the left at 0, right at 4", top at 0 and bottom at 4".

To set the offsets so the man can go no closer to the left edge we enter .5 in the left box. To do the same on the right we can either type in 3.5 or we can type in .5- Notice the negative sign is entered after the number.



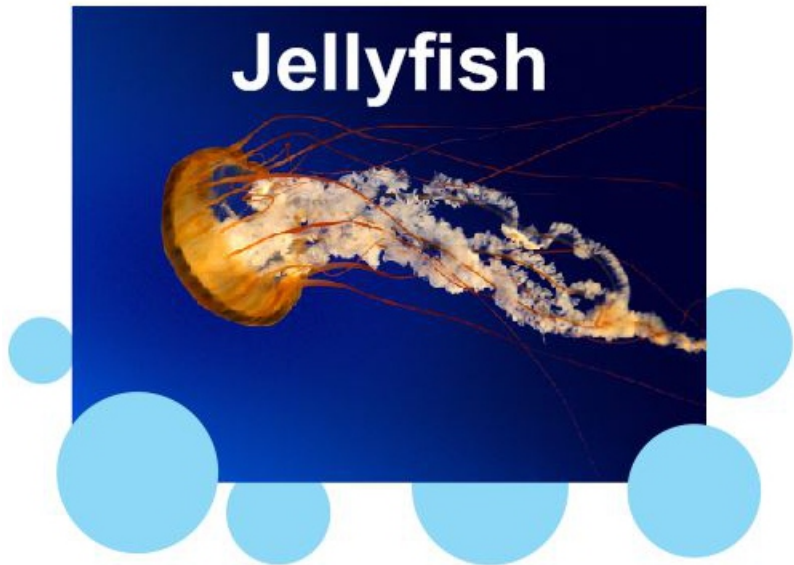
If we now want to add an extra .25" of margin to the left side for a total of .75" we can either swipe through the current number of .5 and type .75 or .25+ To do the same for the right side we would swipe through the current number of 3.5 and either type 3.25 or .25- The left margin is now .75 and the right is 3.25



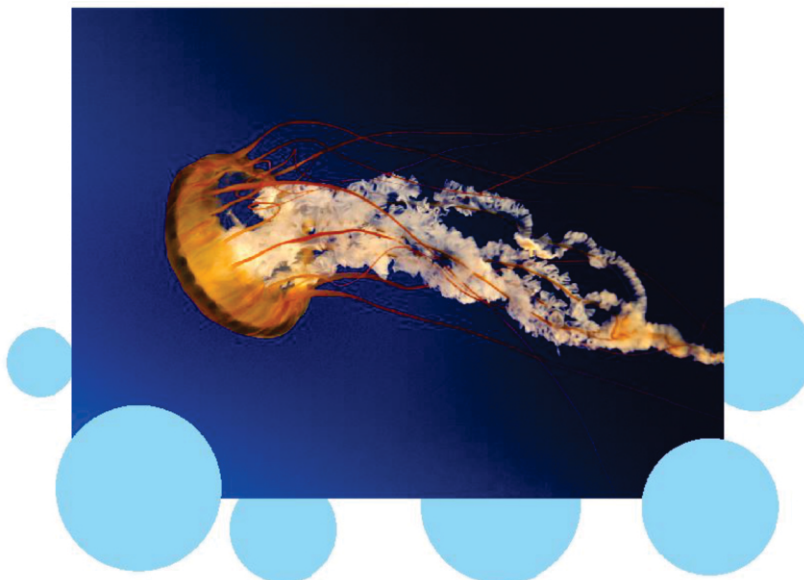
# Object order

Depending on what type of objects you are using to create your graphic and the program you are using stacked objects may need to be re-ordered.

In this example the jellyfish bitmap has a line of text on top and circle graphics partially on top and underneath



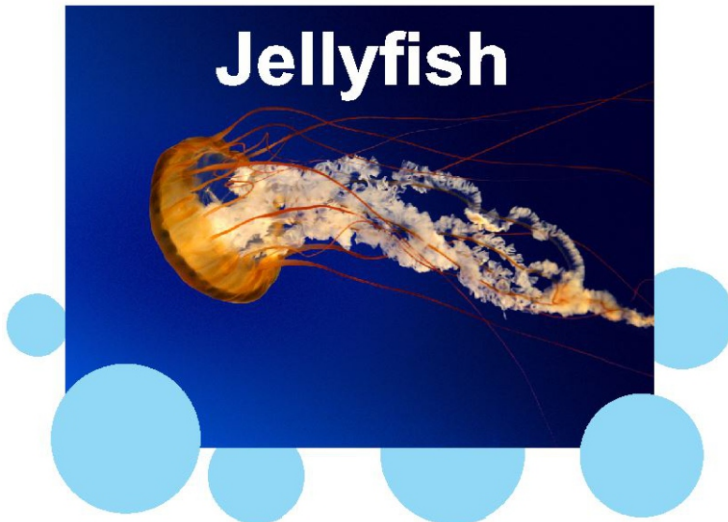
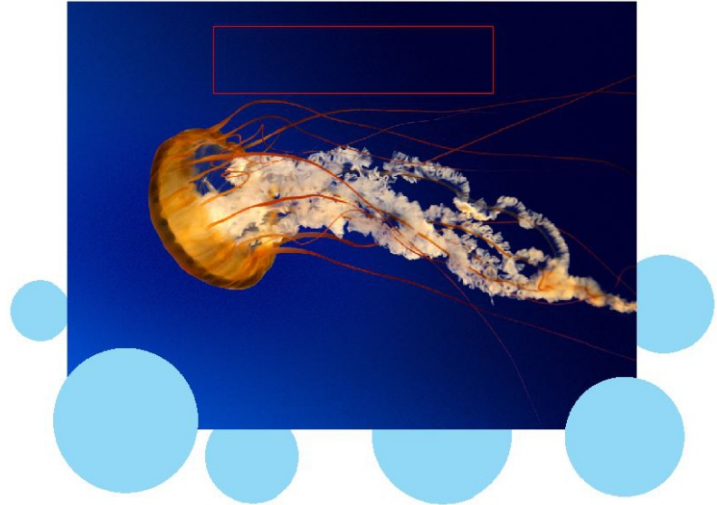
This is the result when we send this to Carpathia



The text is not showing because it is under the bitmap

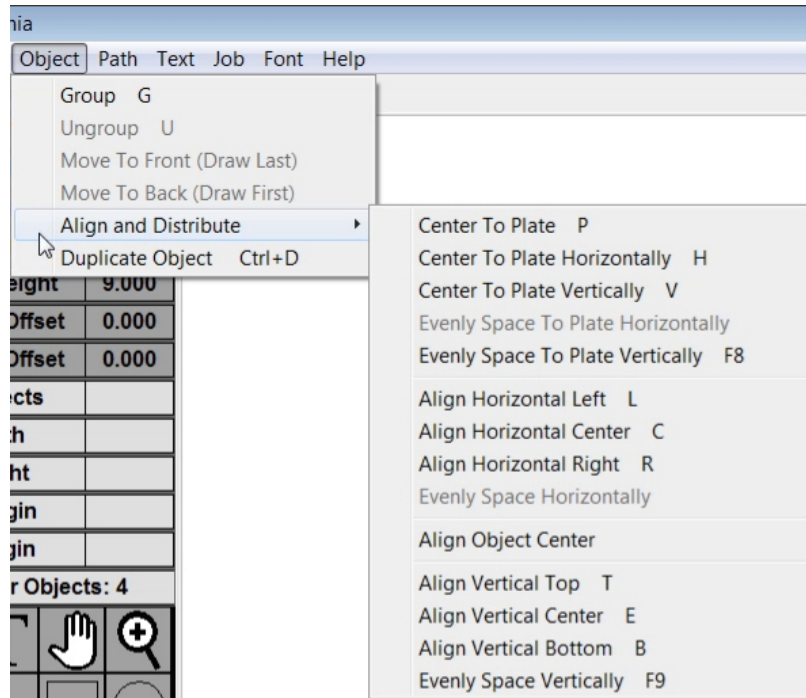
Tab through the objects until the text is selected.

Go to the “object” tab and select “Move to front (draw last)”

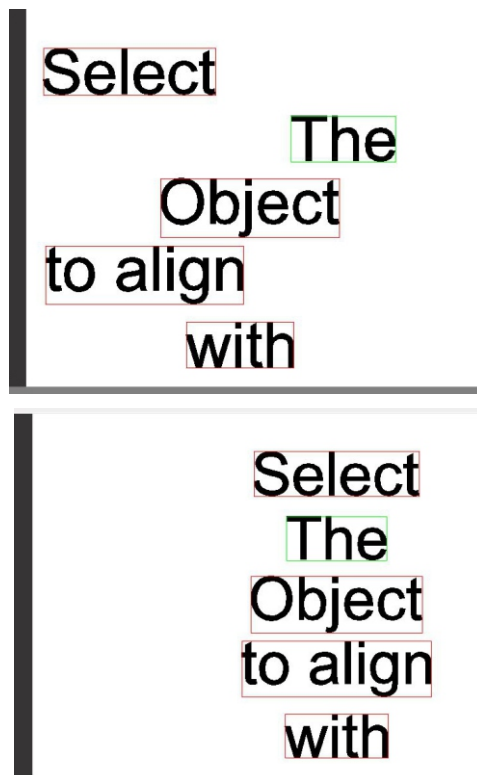


The text now appears on top of the bitmap

# Align and Distribute



After selecting all the objects you need to align, hold Ctrl+Alt and select the master object for alignment



The master object will have a green selection box around it. Now any alignment function will refer to it. If you do not select a master object Carpathia will use the first created of all the objects selected.



# **Mass Production Module**

# Mass Production Module

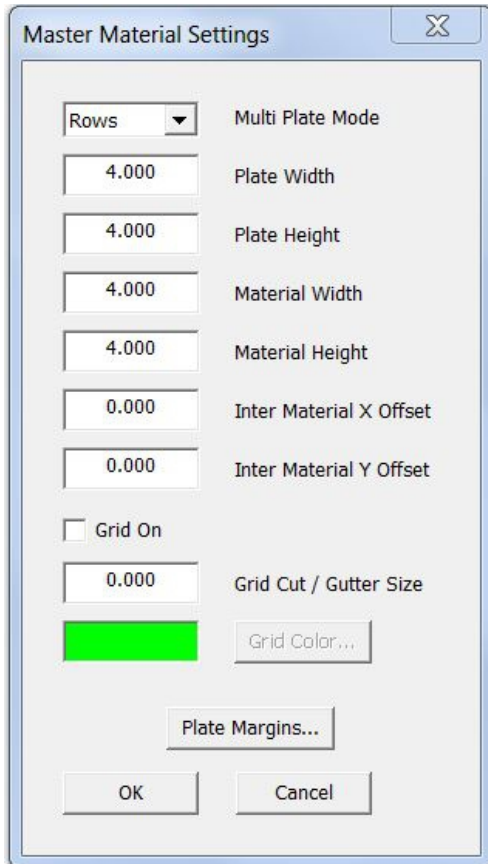
The Mass Production Module adds several features to Carpathia.

## Multiple Plate and Masters

Text Merge

Job Merge

Grid cutout



Mass Production Module provides you the ability to enter your material size. Your plate size will always have to be smaller or the same size as your material size. A common example would be 1"x3" name tags to be engraved on a 24"x12" sheet of material. As you generate more plates either by using duplicate plate, text merge, or serialization, Carpathia will automatically fit the plates to the material size you entered either by rows or columns.

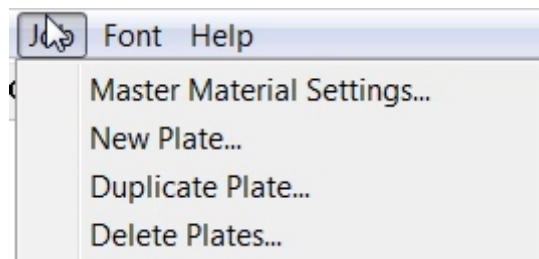
If you are using grid cutout you may want to input an inter material offset so your system will not be cutting right against the rulers.

If you are using a laser engraver, your grid cut size is typically .008" This value can be left at 0 and grid cut will still work but a typical plastic tag will be at least .008" smaller than the plate size due to the material that burns away when cutting.

In the Job menu tab the Mass Production Module adds three new options. You can create a new plate, duplicate a plate, and delete plates.

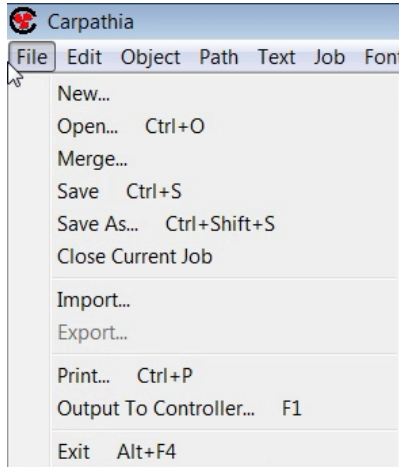
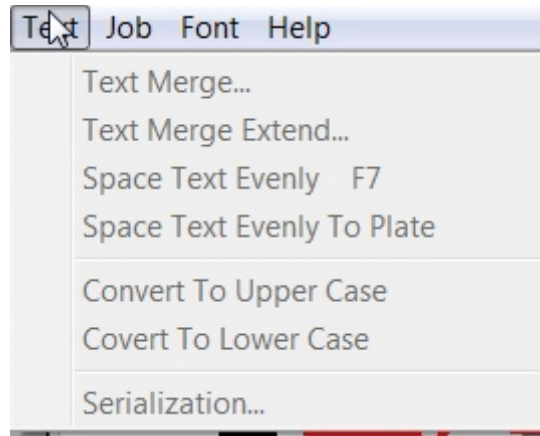
A new plate does not have to be the same size as the previous plates. The most efficient layouts usually start with the largest plates then work down to the smallest.

You can select any plate to duplicate, and select how many duplicates you want. It will tack on the new plates after the last existing plates on your job.



When you delete plates the plate you have selected and any plates after will be deleted by the number you select. Carpathia will always leave one plate no matter how many you entered.

The Mass Production Module adds Text Merge, Text Merge Extend, and serialization to the “Text” menu tab.



The Mass Production Module adds Merge to the “File” menu tab.

## Creating margins for Text Merge and Serialization



Margins need to be set before using text merge or serialization to prevent this type of problem.

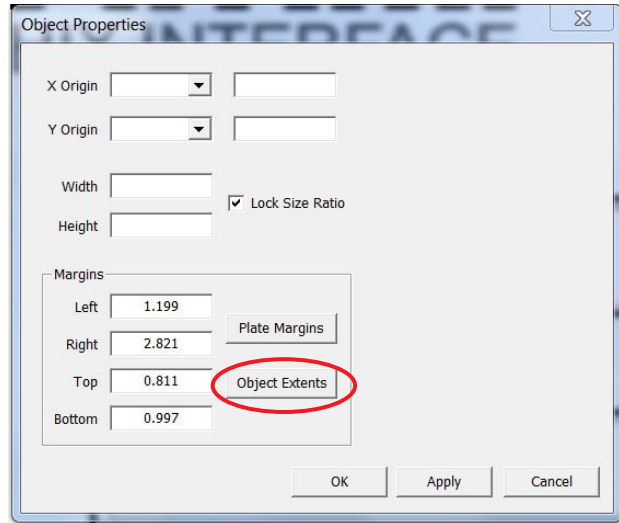
Use the rectangle tool to draw a box that represents the max range for the text. In this example we duplicate the rectangle and place in all three fields.



Select the variable text and the rectangle representing the range by using ctrl select.

Open the Object Properties dialogue (first of the light gray buttons on the left side tool bar)

Click the Object Extents button to change the margins from the plate extents to the extents of the full selection which in this case is the rectangle.



Delete the rectangles. The text objects will retain the margins .

Save the job.

Now when you use text merge or serialization the text will be forced to stay inside the new margins.

Notice in this example we drew our rectangle in a way that even allowed the text to push a little to the left once the space to the right was consumed, then it changed the aspect ratio of the text to compensate for the rest.



X left, Y top

Name

Title

X center, Y center

Name

Title

Use the Object origin drop down boxes to select how you want the text to spread and shrink. For In this example we used X left and Y top. In some cases you will want to use X center Y center

# Text Merge

Text Merge is an easy way to take large amounts of variable data from a spreadsheet, email, database, etc. and merge it into a job. This feature only works with text, vector objects, and images like bitmaps do not work with this feature.

To use the text merge feature you must have a text placeholder in your job. You can have static text lines or other types of objects in the job. They will be duplicated in place across each plate.

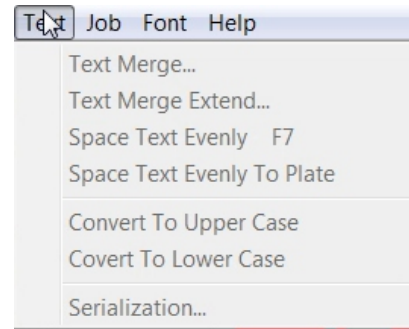


Laticia Babineaux
Dierdre Kiser
Sarina Trptman
Lou Heintz
Jody Monroy
Suzy Rodi
Corliss Tackitt
Scot Meier

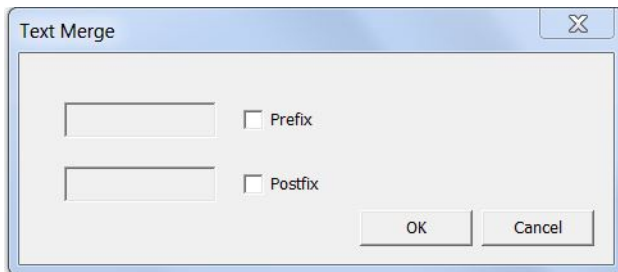
Once you have the placeholder, go to your variable data. In the example shown here we are merging names to a plate. Each name is one line of text.

Copy the list of names to your clipboard by dragging your mouse over the list, right clicking, then selecting copy.

Return to Carpathia, click the “Text” menu button, then click “Text Merge...”



In this example we are not using prefix or postfix so click “OK”



The first name in the list replaces the placeholder then a new plate is created for each name after that.

See the Multiple Plates and Masters section of this manual for instruction on managing plates.

Laticia Babineaux	Dierdre Kiser
Sarina Trptman	Lou Heintz
Jody Monroy	Suzy Rodi
Corliss Tackitt	Scot Meier

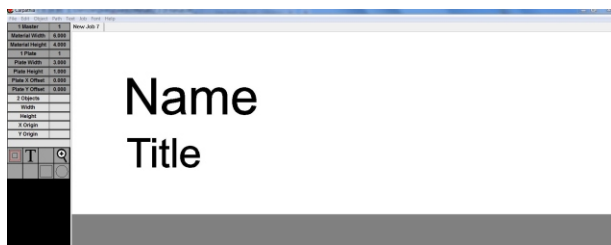


# Text Merge with multiple lines

In some instances multiple lines of variable data exist on the same plate.

In this example we have the name line and the job title line. As long as our variable data is organized in the proper order the text merge is simple.

Laticia Babineaux	Cost Estimator
Dierdre Kiser	Landscape Architect
Sarina Trptman	Civil Engineer
Lou Heintz	Computer Programmer
Jody Monroy	English Teacher
Suzy Rodi	Musician
Corliss Tackitt	Electrician
Scot Meier	Insurance Agent



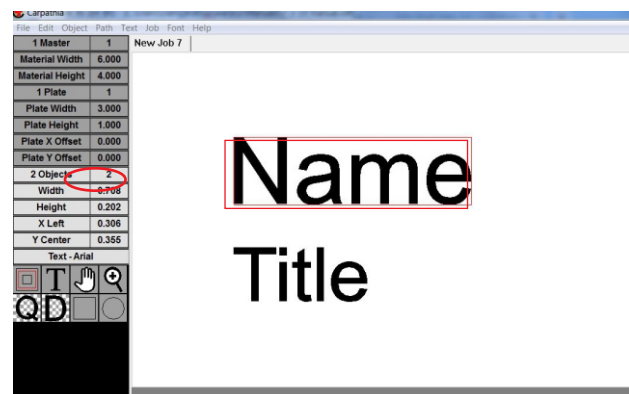
you need to have a placeholder for each line, then go to your list, copy, when you get back into Carpathia select both lines of text then perform the text merge.



The data will flow in order to your plates.

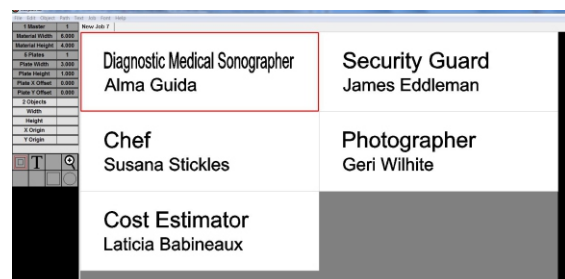
## Text Merge Object Order

If you have your placeholders in the wrong order your text merge will work in the wrong order. In this example we made the name placeholder the second object by going to the "Object" menu tab then clicking "Move to Front (Draw Last)"



Now when we merge our list the title is in the Name line and the name in the title line.

This concept can also be used to "correct" the order if your variable data list is out of order.



# Text Merge Extend

In some instances the order of the variable data will not be listed in the order needed to appear on the plate. In this example the last names are listed first.

First step is to copy the list of first names to the clipboard.

Babineaux	Laticia
Kiser	Dierdre
Trotman	Sarina
Heintz	Lou
Monroy	Jody
Rodi	Suzy
Tackitt	Corliss
Meier	Scot

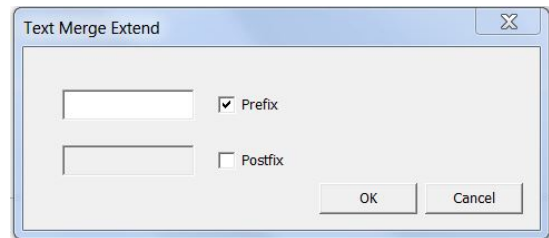
Laticia	Dierdre
Sarina	Lou
Jody	Suzy
Corliss	Scot

Perform a text merge with the first names.

Go back to the name list and copy the last names to the clipboard.

On the first plate select the name then in the “Text” menu select “Text Merge Extend...”

Notice the dialogue is defaulted with a prefix selected. This prefix is a space. Click the “OK” button.



Laticia Babineaux	Dierdre Kiser
Sarina Trotman	Lou Heintz
Jody Monroy	Suzy Rodi
Corliss Tackitt	Scot Meier

The last names are now added to the first with the space between them. You can extend any line as many times as needed.

# Text Merge Prefix/Postfix

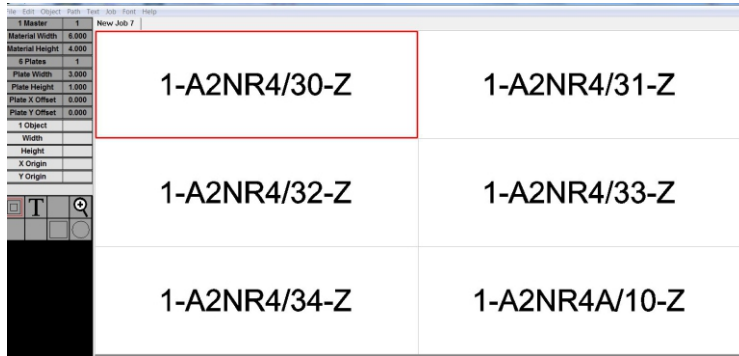
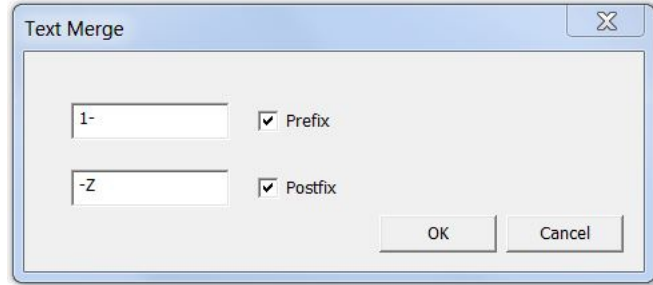
There can be times that variable data requires additional information. In this example we will be adding information to product model data.

Each of these requires a 1- at the beginning and a -Z at the end.

A2NR4/30
A2NR4/31
A2NR4/32
A2NR4/33
A2NR4/34
A2NR4A/10

In the “Text Merge” dialogue we check both the Prefix and Postfix boxes.

Type in 1- for Prefix and -Z for Postfix then click “OK”.



The Prefix and Postfix are added to the variable data on each plate.

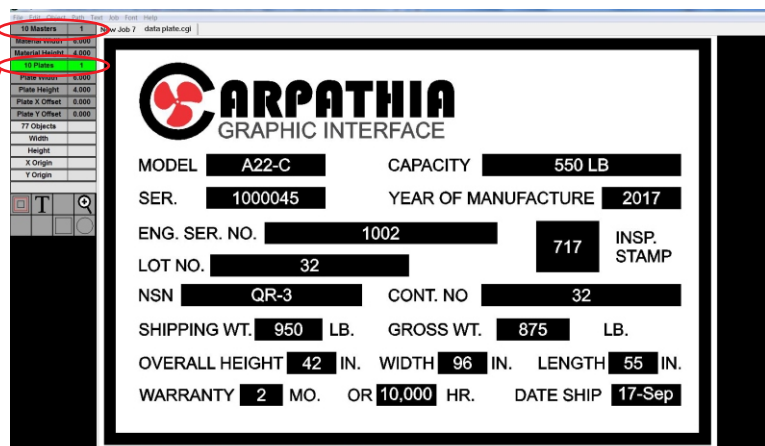
## Multiple Plate

Most graphic programs use the page model, meaning your work space is a page and you can have multiple pages in a document. Carpathia is plate driven. A plate is similar to a page but has more capabilities. In the plate and master model you can create multiple plates that can either be set to behave like pages or you can enter your material or table size called a master, and Carpathia will automatically fit as many plates on that master as possible.

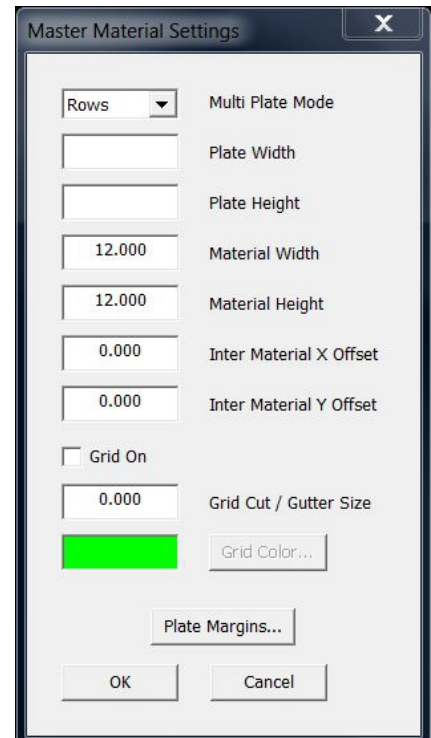
In this example we performed a text merge on our template, creating 10 plates. With Multiple Plate mode off each plate is treated like a separate page.

Indicates how many Masters and which one we are viewing. In this case since each plate is its own master we have 10.

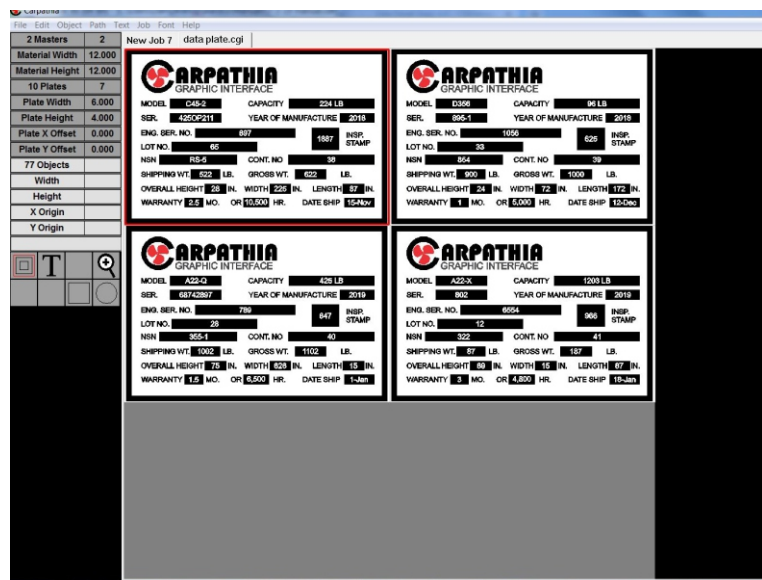
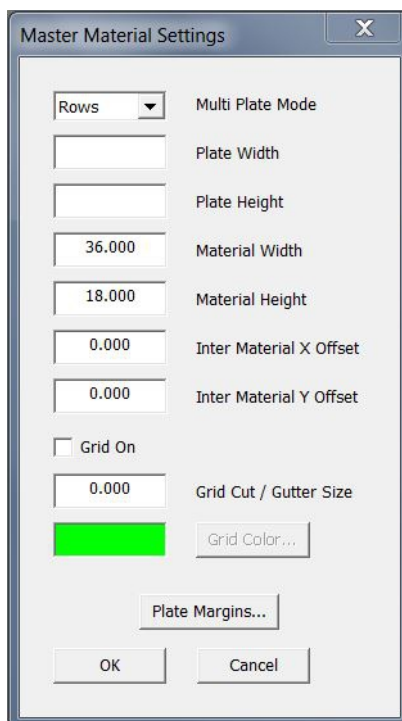
This indicates how many plates we have and which plate is currently selected.



If we open the “Master Material Settings” dialogue we can turn on Multi Plate Mode by selecting Rows or Columns. We enter a material size, in this example we choose 12”x12”.

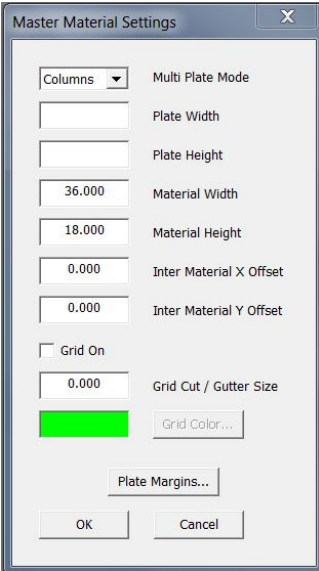
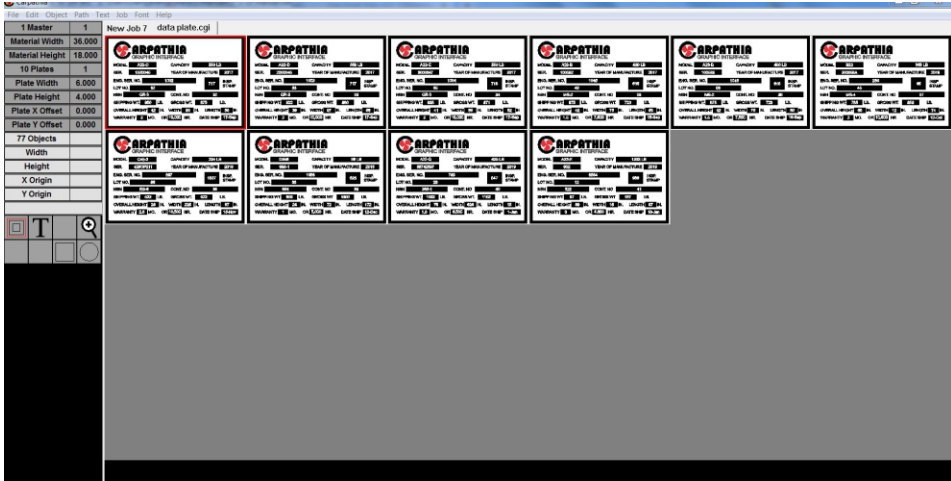


Now we have 2 Masters rather than 10. The first 6 plates are on the first Master and the last 4 plates are on the second Master.

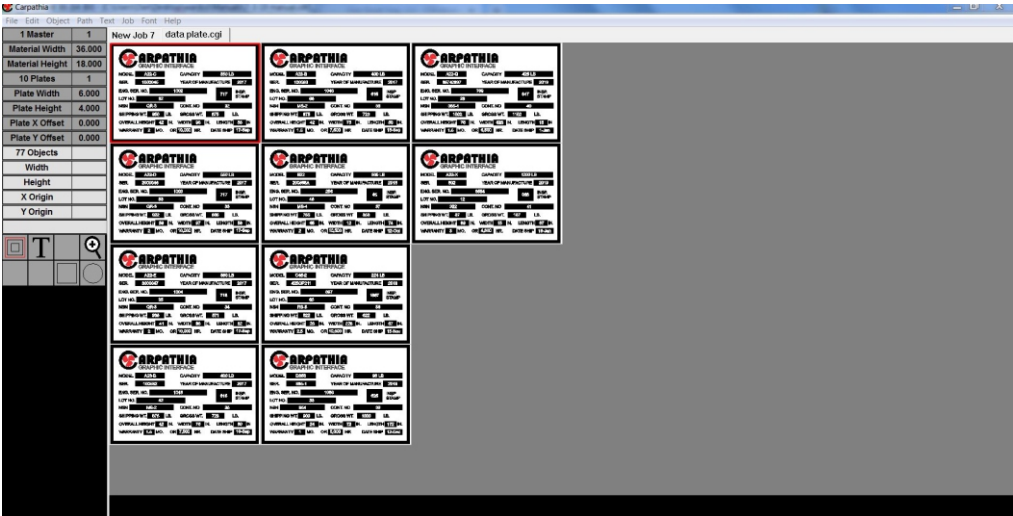


We now make our material size 36”x18”.

The results are all 10 plates on one Master.

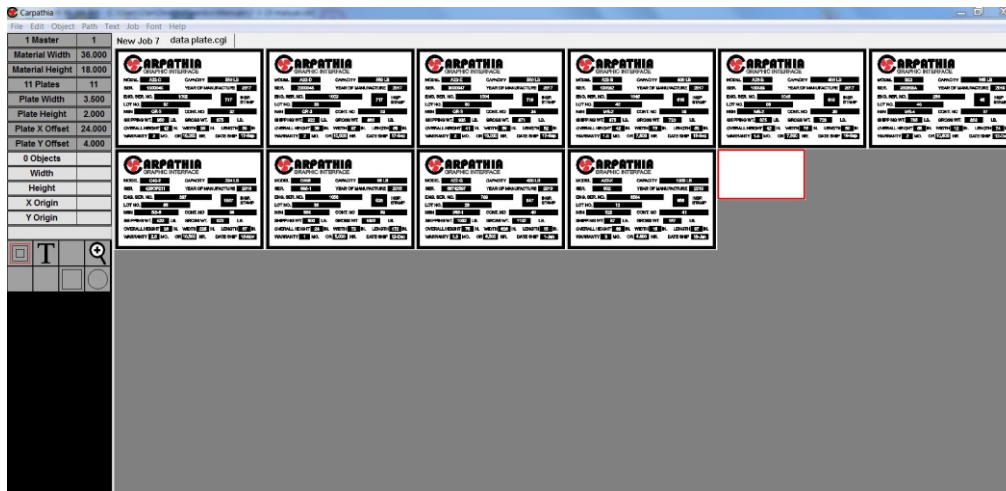
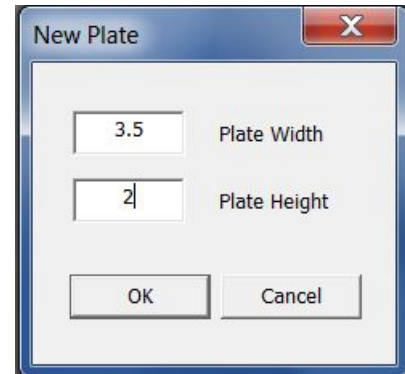


If we switch our Multi Plate Mode from Rows to Columns, the plates arrange along the left side of the material.



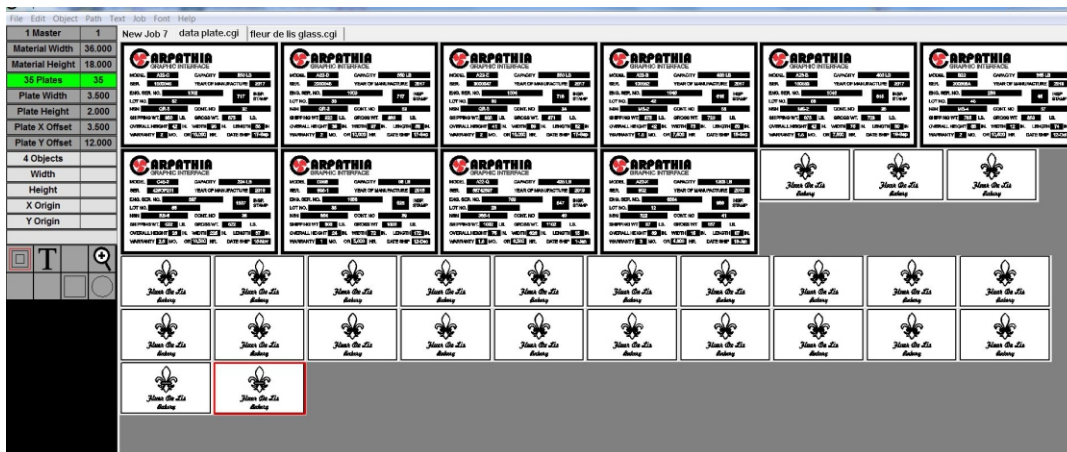
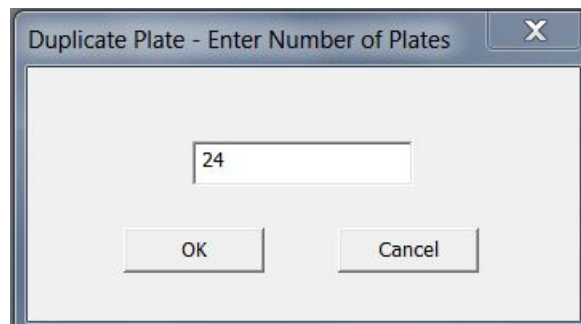
# Variable size plate

Carpathia provides the ability to have varying size plates on a master. This is helpful if you have a set of small jobs to run on one sheet of material. When you are ready to add a new plate, go to the “Job” menu tab, then select “New Plate”. Enter the desired size for the new plate then click “OK”.



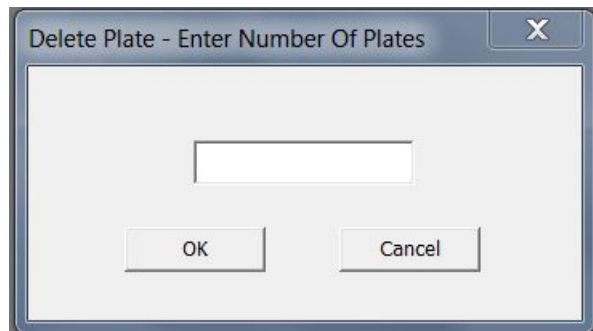
# Duplicate Plate

If you have a plate with static information that you need multiples of you can go to the “Job” menu tab, select “Duplicate Plate”, enter the number of plates you wish to add then click “OK”



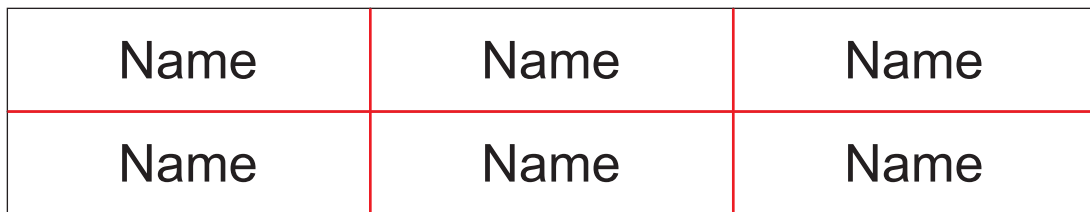
# Delete Plate

To delete plates select the one or first one of the plates to be deleted. Go to the "Job" menu and select "Delete Plate". To delete only the selected plate enter 1. You can delete an exact number, or if you want to delete all the plates from the selection on you can just type in a large number like 900. If you select the very first plate and use a large number, all plates except 1 will be deleted.

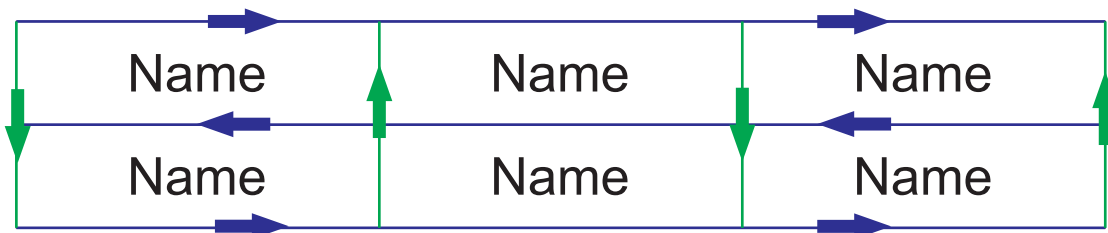


# Grid Cut/Gutter Size

When cutting objects like name tags using typical graphic software there is no consideration for efficiency. In the first example we show how much redundancy there is when cutting. The red lines indicate all cut lines that the laser will run twice.



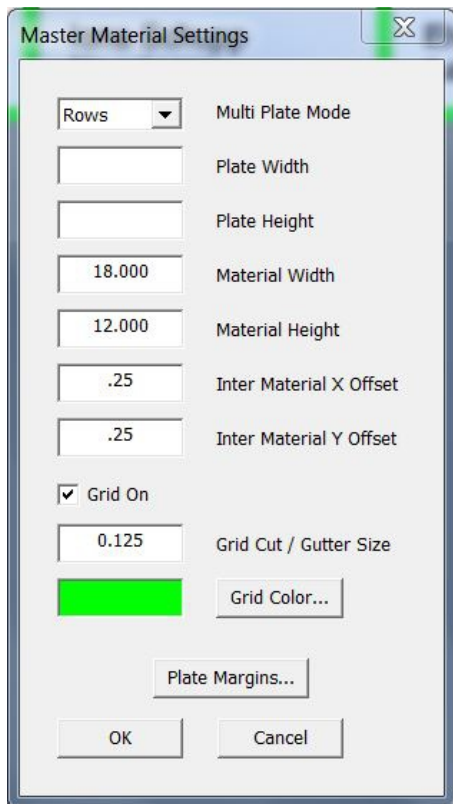
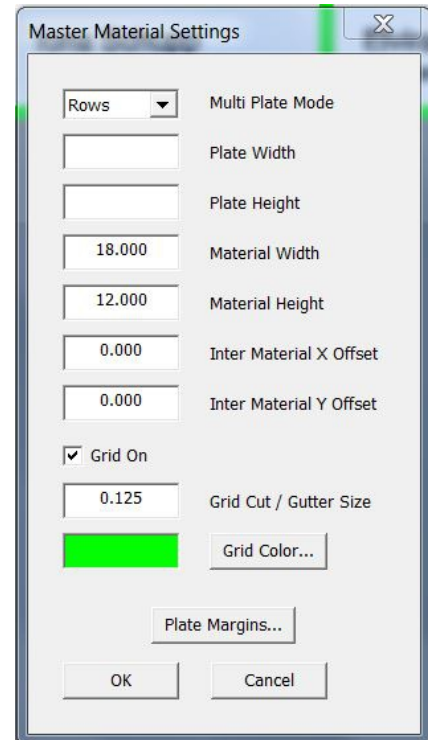
A proper grid style cutout like Carpathia's eliminates the redundancy. First all of the horizontal lines are cut, shown in blue, then the vertical ones shown in green.



Any time material is cut some of the material is lost. When cutting with a laser it can be as little as .008", but when using a router or mechanical engraver it can be a large number like .25"

You do not have to use a grid cut size, it can be left at 0. The plates will be smaller by the amount of material your system removes, and in the case of a laser would probably never be noticed

In this example we used a grid cut size of .125". In the image below you can see that now only 5 plates fit across the material rather than 6.



If you do not want your system cutting right against the X and Y rulers you can add an Inter material offset. These can be set individually. In this case we will move the job away from the rulers by .25"



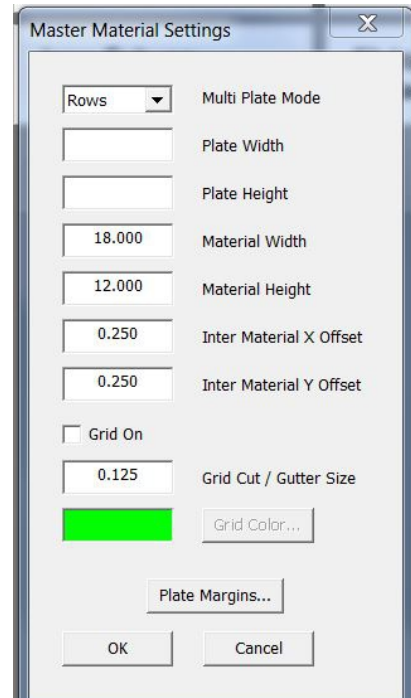


In some instances it is necessary to have the distance between plates but not use grid cut. An example of this would be laser engraving pre cut metal tags. The most efficient way to do this is to cut a jig out of a material like acrylic then place the metal tags in that jig, and engrave them all at once.

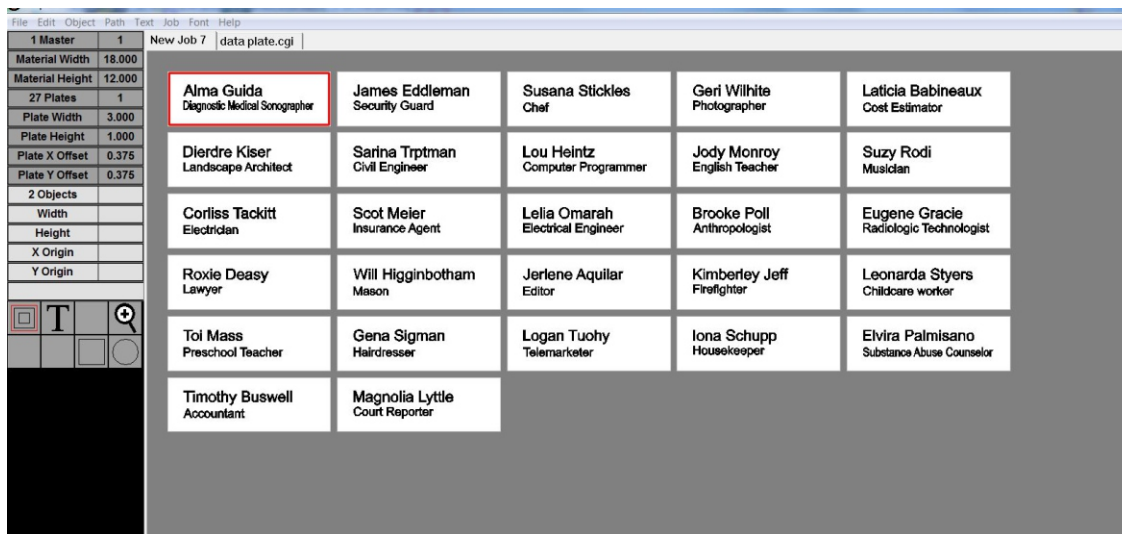
### Creating a jig

First make a plate the size of the tag, with the material size equal to the material for the jig. Without turning on grid cut enter the space you want between the holes for the tags. .25" usually works well. You will have one blank plate, draw a rectangle that is the same size as the plate. Duplicate that plate until the material is full. Save this job as your jig job.

Next follow the same steps to layout the template job you will use for engraving. This time you do not need the box on the plate, just the objects to be engraved.



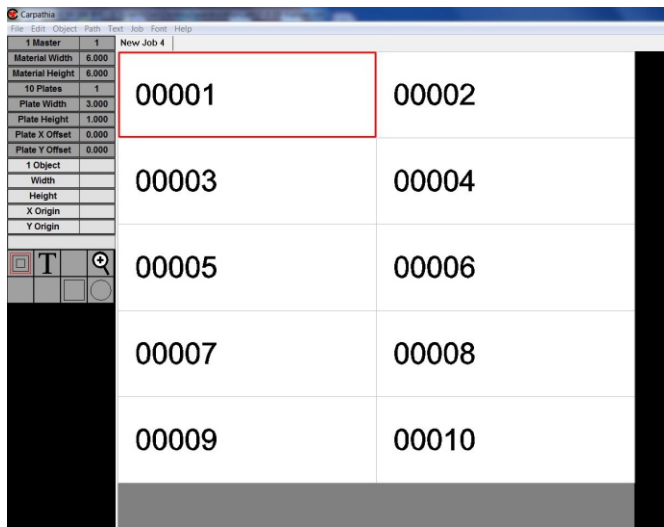
You can have multiple templates for that size tag and they will all line up perfectly with the jig, as long as gutter size and any inter material offsets are the same.



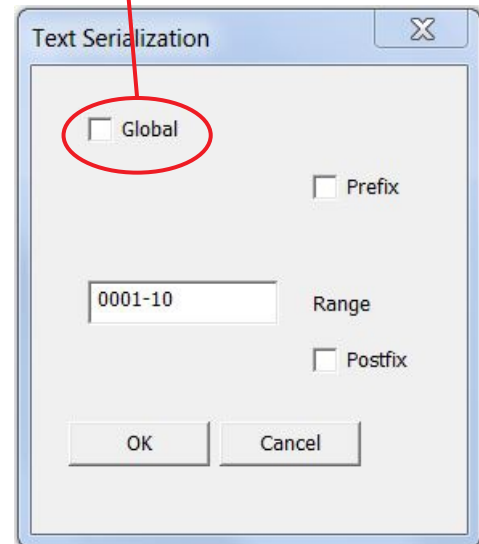
# Serialization

To open the Text Serialization dialogue go to the “Text” menu tab then click on “Serialization”

You can use zeros as place holders and you do not have to include them on the second part of the range. This example shows how this works.



Selecting the “Global” button means that you are using a serial number that is stored outside of the job, and can be accessed from other jobs.



You can add static prefixes and postfixes as needed.



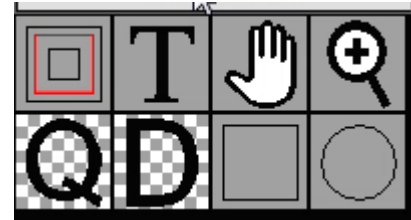
The serialization feature only allows one line of text per plate to be selected.



# 2D Code Module

# 2D Code Module

When the 2D Code Module is unlocked the QR code tool and Data Matrix tool will appear any time you have text selected. This is a visual indication that the objects you have selected are capable of being converted to a 2D barcode.



**QR Code Tool**

Select a line or lines of text then left click the tool button once to convert them into a QR code. Vector objects and bitmaps can not be converted to QR code so they must not be selected.

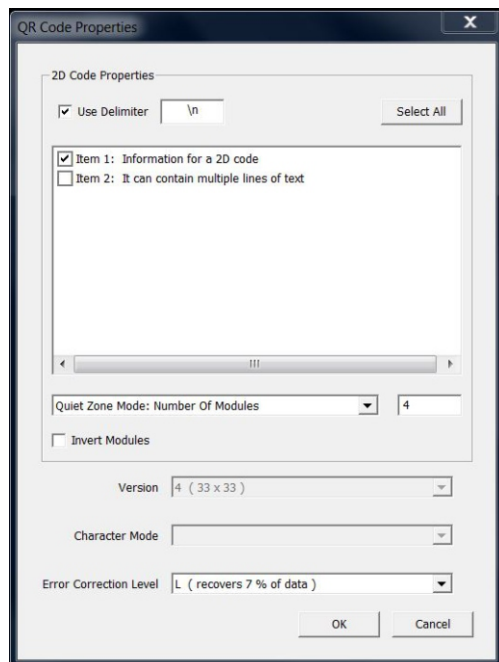
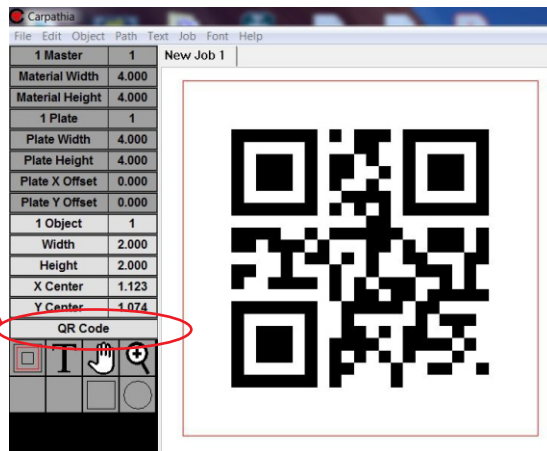


**Data Matrix Tool**

Select a line or lines of text then left click the tool button once to convert them into a Data Matrix code. Vector objects and bitmaps can not be converted to Data Matrix code so they must not be selected.

Click the properties button to open the QR or Datamatrix Code Properties dialogue.

Each line of text is represented as an item that can be selected for functions like text merge or serialization.

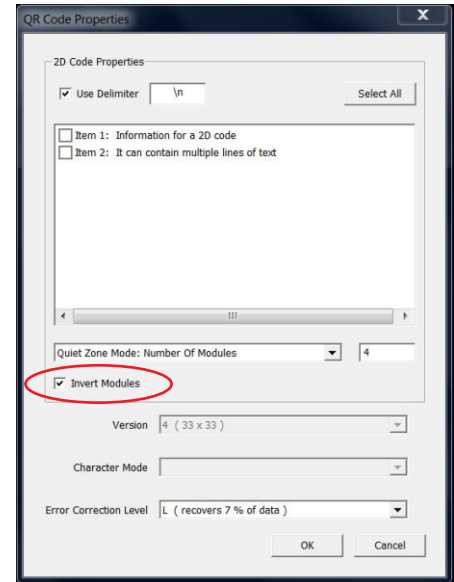


Delimiters allow some software programs to interpret the way information is stored in a QR code. Datamatrix codes do not have this feature. We have a set delimiter that allows the QR code to have multiple lines of text rather than forcing them to be on a single line. If you require all lines of text to be read as a single line turn off the delimiter.

The Quiet zone is the area around the edges that contains no information. Some readers require larger quiet zones than others.

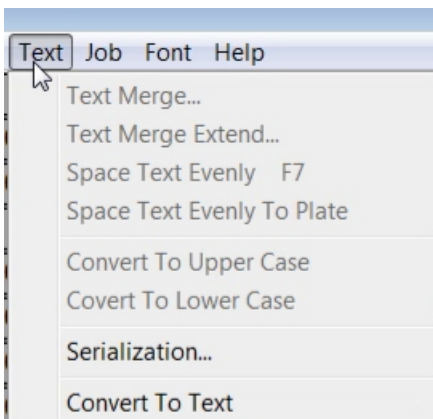
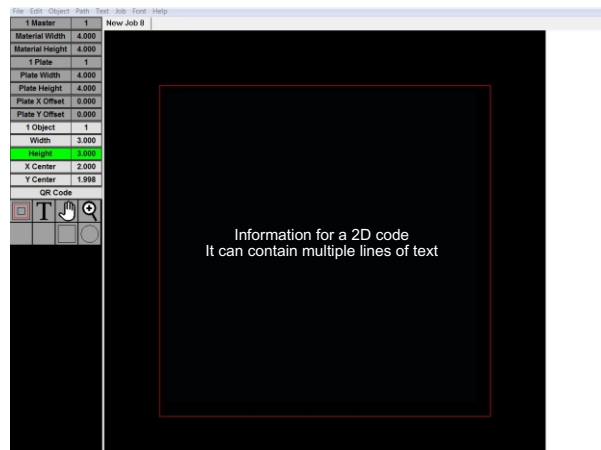
Error correction level is only available for QR codes. The higher the correction level the more the code can be damaged but still work.

2D codes only work when the data portion of the code is represented in black. If you are engraving on a material with a darker background than the mark you are making, like anodized aluminum the code must be inverted.



To quickly view the contents of a 2D code use wireframe view by pressing ctrl+w.

Press ctrl+w again to return to normal view.



At any time a 2D code can be converted back to text by going to the "Text" tab on the menu bar then selecting "Convert To Text".

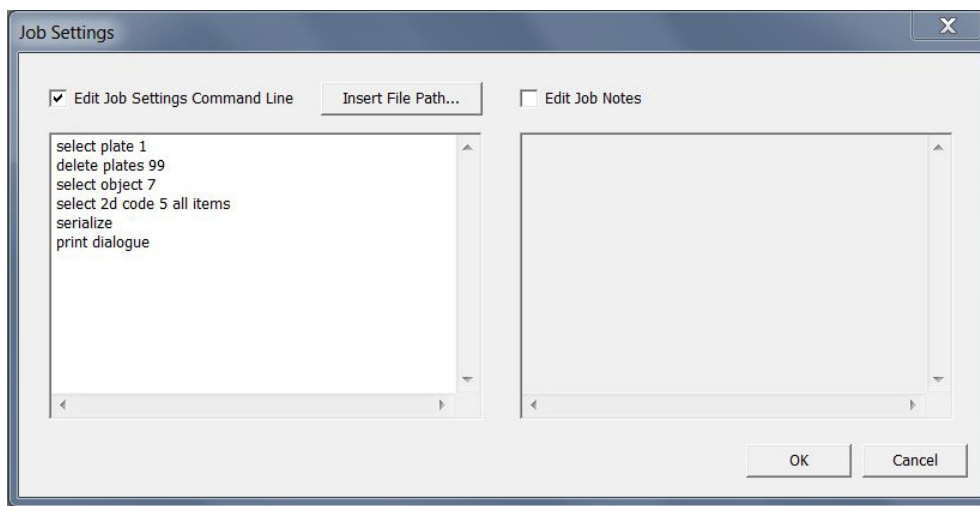


# **Job Command Module**

# Job Command Module

The Job Command Module allows you to automate some or all of a job. For example if you have a template job that requires you to select certain objects for a text merge, you can enter a command line, so each time you open the job those objects are already selected. You can go as far as completely automating a job so that when you open it, all tasks are performed even a text merge from a document and all you see is the print screen appear with the job ready to run.

To access the Job Settings dialogue go to the “Job” menu tab, select “Job Settings”, then click the “Edit Job Settings Command Line” box.



The following is a list of all the command lines available. A command line can be created for almost any function in the software. If you need a command line that is not listed here contact One Small Step. You can find the contact information at [onesmallstep.global](http://onesmallstep.global)

Command lines are not CaSe seNSiTiVe.

Do not press the enter key after entering a command line. If the cursor is on a new line the software will interoperate it as an incomplete command.

## Command Line Options

If you are using the serialization routine then after all of the new plates are created you will need to save the job so that next time you open the job the serial number will be on the correct number. This means that the first thing to be done when opening it again is to remove all of the extra plates created previously. Your command lines should read as follows...

```
select plate 1
delete plates 100
```

Be sure to use a large enough number to cover all the plates you could possibly have. The delete plate routine will always leave one plate no matter how large the delete number is.

---

In most cases you will need to deselect all after each command before selecting the next object for a command. If you do not then the next command will be performed on both the original selected object and the new object. The deselect command is...

deselect all

---

To perform acts on objects you must first select the objects to act on. You can select one object or multiple objects. The number following the command is the object number. You can find an object number by selecting it in the job and looking at the left side tool bar that shows how many objects are in the job and which object is selected. (see illustration below.)

The select object command is...

select object 11

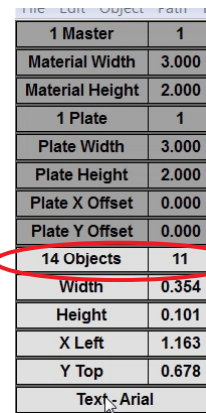
In this example the object number is 11

If you want act on multiple objects at once it will look like this...

select object 11

select object 2

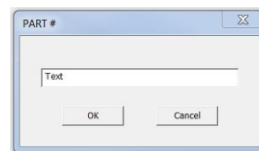
select object 14



1 Master	1
Material Width	3.000
Material Height	2.000
1 Plate	1
Plate Width	3.000
Plate Height	2.000
Plate X Offset	0.000
Plate Y Offset	0.000
14 Objects	11
Width	0.354
Height	0.101
X Left	1.163
Y Top	0.678
Text	Arial

One common command for selected objects is to change text. Whether it be a date, job number etc. the change text command will prompt you with a dialogue box that you title in the command line. When the dialogue box opens the text is selected ready for you to type new information or use a barcode scanner to populate the field. In this example we are titling the dialogue box Part #.

change text Part #



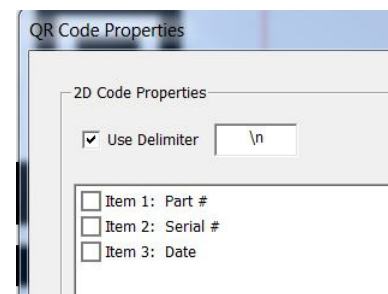
To select an item in a 2d code (data matrix or QR code) you need to select the object number of the 2d code just like we do with text and then you need to add the item number from within the 2d code.

select 2d code 3 1

change text Part#

The above example shows us selecting the 2d code that is object 3 then a space and 1 for the item within the 2d code. You can also select all items in a 2d code.

select 2d code 3 all items





You can select all of the text in your plate with the following command...

select all text

---

Text merge commands need to be done in a specific order. If you are using a prefix and/or postfix those need to be entered first. After that you can enter the text merge path, then if needed the extended path.

text merge prefix Honorable

text merge postfix Circuit Judge

text merge path C:\Users\Frank\Desktop\Judge first names

text merge extend path C:\Users\Frank\Desktop\Judge last names

Text merge commands should be the last or second to last command that changes plate data. The only variable data command that should come after text merge is serialization.

---

To run the serialization routine on an object use the following command...

serialize

The serialization routine should be the last command line that affects the plate information.

---

You can have Carpathia open the print dialogue for you after all of the other job operations are finished. The command for this function is...

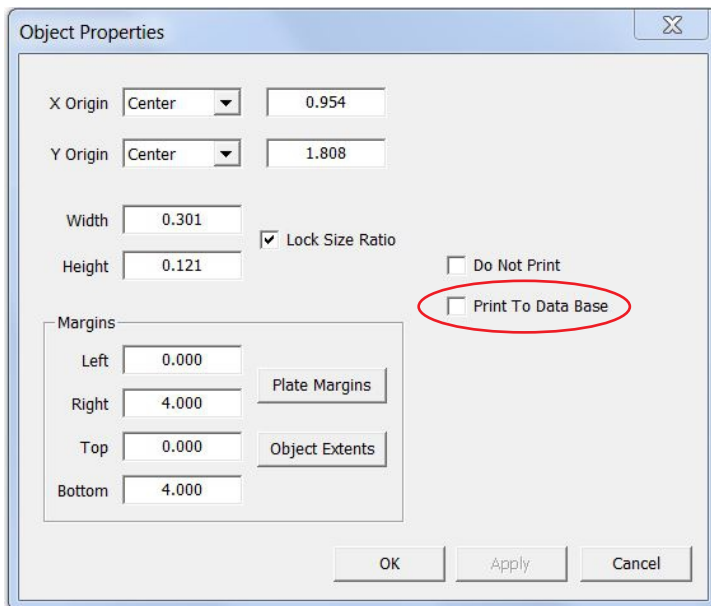
Print dialogue



# Data File Module

# Data File Module

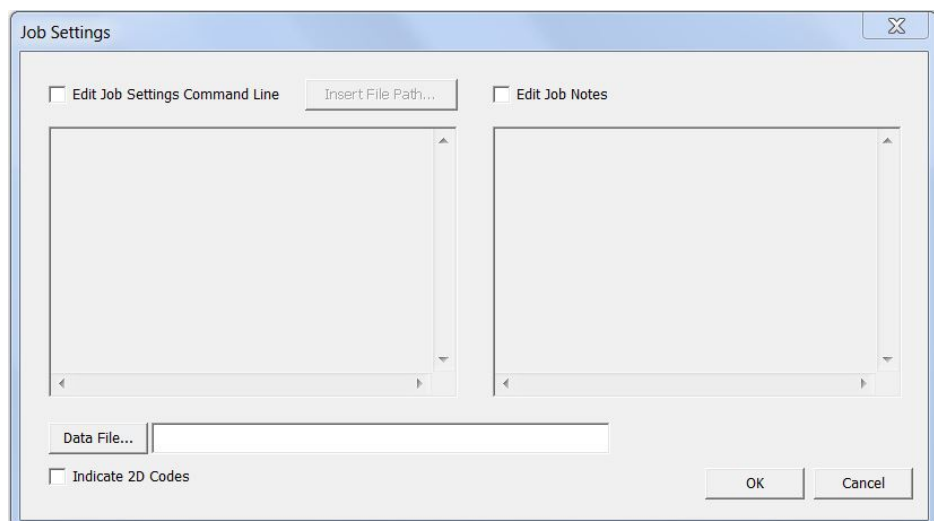
The Data File Module allows you to create a data file from your Carpathia job rather than creating a data file first then merging the variable data to the job. An example of this is creating serialized data plates in Carpathia. You can enter all of your data, perform the serialization, then when you print the job you can point any of the data fields you choose to a data file. If you point to a pre-existing file it will append the new information.



When the Data File Module is unlocked you have the “Print To Data File” check box in the Object properties dialogue. Select any text objects you want to send then check this box. If you have several text objects selected and the box shows a grayed out check that is indicating some of the objects are set to print and others are not. You can toggle through between not checked, checked, and back to grayed out check. Any text in a 2D code that you want to send to the data file needs to be checked before it is converted.

In the Job Settings dialogue there is a place to search for or create the file you want to send the data to.

If you need the data file to indicate which data is contained in 2D codes you can check the “Indicate 2D Codes” selection box.



In this example we created our first 10 plates and printed with the 2D code identifier off.

```
Data.txt - Notepad
File Edit Format View Help
Date Model Serial# Customer Batch
7-30-19 GT45 1A001Z2 Peak Formula 14586
7-30-19 GT45 1A002Z2 Peak Formula 14586
7-30-19 GT45 1A003Z2 Peak Formula 14586
7-30-19 GT45 1A004Z2 Peak Formula 14586
7-30-19 GT45 1A005Z2 Peak Formula 14586
7-30-19 GT45 1A006Z2 Peak Formula 14586
7-30-19 GT45 1A007Z2 Peak Formula 14586
7-30-19 GT45 1A008Z2 Peak Formula 14586
7-30-19 GT45 1A009Z2 Peak Formula 14586
7-30-19 GT45 1A010Z2 Peak Formula 14586
```

```
Data.txt - Notepad
File Edit Format View Help
Date Model Serial# Customer Batch
7-30-19 GT45 1A001Z2 Peak Formula 14586
7-30-19 GT45 1A002Z2 Peak Formula 14586
7-30-19 GT45 1A003Z2 Peak Formula 14586
7-30-19 GT45 1A004Z2 Peak Formula 14586
7-30-19 GT45 1A005Z2 Peak Formula 14586
7-30-19 GT45 1A006Z2 Peak Formula 14586
7-30-19 GT45 1A007Z2 Peak Formula 14586
7-30-19 GT45 1A008Z2 Peak Formula 14586
7-30-19 GT45 1A009Z2 Peak Formula 14586
7-30-19 GT45 1A010Z2 Peak Formula 14586
7-30-19 GT45 1A011Z2 Peak Formula QR 1: 14586
7-30-19 GT45 1A012Z2 Peak Formula QR 1: 14586
7-30-19 GT45 1A013Z2 Peak Formula QR 1: 14586
7-30-19 GT45 1A014Z2 Peak Formula QR 1: 14586
7-30-19 GT45 1A015Z2 Peak Formula QR 1: 14586
7-30-19 GT45 1A016Z2 Peak Formula QR 1: 14586
7-30-19 GT45 1A017Z2 Peak Formula QR 1: 14586
7-30-19 GT45 1A018Z2 Peak Formula QR 1: 14586
7-30-19 GT45 1A019Z2 Peak Formula QR 1: 14586
7-30-19 GT45 1A020Z2 Peak Formula QR 1: 14586
```

We then turned on the 2D code identifier, created the next 10, and printed to the same file.

You can see that the Batch numbers in our job were part of a QR code.