VariQuest®
Cutout Maker 2800

THE COMPLETE GUIDE

TO DESIGNING SHAPES FOR THE VARIQUEST® CUTOUT MAKER 2800

MyShape™ FEATURE

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GETTING STARTED

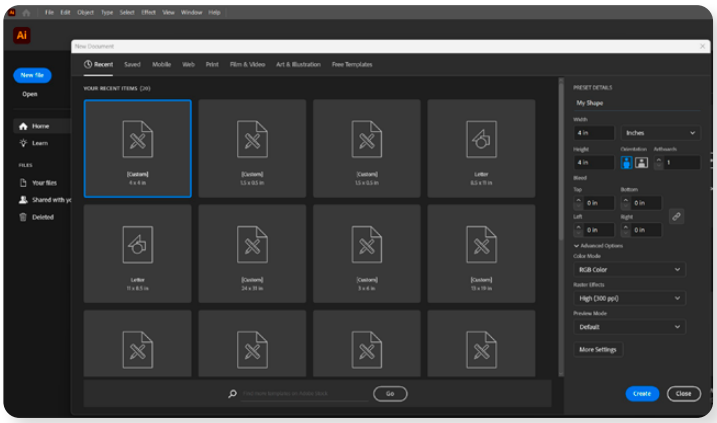
Exclusive to the Cutout Maker 2800, the **VariQuest® Design Center Software** now offers the MyShape™ feature for those looking to import and cut their own creations using the VariQuest® Cutout Maker Digital Die-Cut Machine! This guide walks through the recommended design process for creating cut shapes compatible with the Cutout Maker 2800, and shares helpful information to ensure a shape will cut as the designer intended.

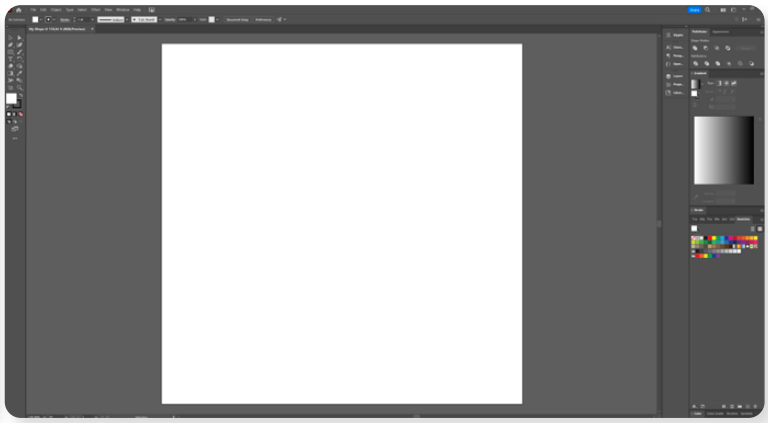
Document Setup

The VariQuest® Design Center Software requires a **vector graphic** for the MyShape™ feature, and is currently only compatible with the Adobe® Illustrator® file format. A vector graphic created with any other platform will need to be opened and saved out as an Adobe Illustrator file.

> ***Note:*** *Adobe Illustrator files will need to be saved down to* ***Illustrator Version 3*** *in order to be uploaded using the MyShape feature. See Saving & Exporting for more details.*

When creating a new document for designing a cut shape, or when opening an existing vector graphic in Adobe Illustrator, it is important to consider the smallest size the shape should be cut at. The size of the artwork in the document, when imported into the software, will be designated the **minimum cut size** for that shape. If an attempt is made to cut the shape smaller than the size it was imported at, the VariQuest software will issue a warning message informing the user that a shape is being cut smaller than the ***minimum cut size***. A good starting point for *most* shapes is **4" by 4"**, and should increase based on complexity.





> ***Note:*** *Cutting shapes smaller than 2" by 2" is not recommended. Any shape imported smaller than this will automatically size up to 4" wide when added to a* **cut job**.

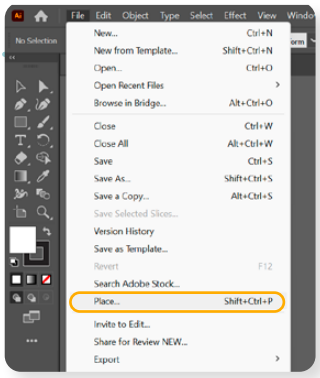
Once a document for the cut shape has been created or adjusted, there are several different ways to proceed to utilize the MyShape feature.

DESIGN PROCESS

A **basic shape** can be achieved by tracing a flat image (JPEG, PNG, PDF, etc.), using the Adobe® generative AI feature, or by manipulating an already existing **vector graphic**.

> ***Note:*** *The following section goes through in-depth examples for designing new, or manipulating existing vector graphics to import as cut shapes for the Cutout Maker 2800 using the MyShape™ feature in the VariQuest® Design Center Software.* ***If using a vector graphic that has already been designed and formatted as a basic shape, go to File Formatting in the Saving & Exporting section, or skip directly to Importing to learn how to import and save the file to the MyShape directory.***

Designing a Shape Using *Image Trace*



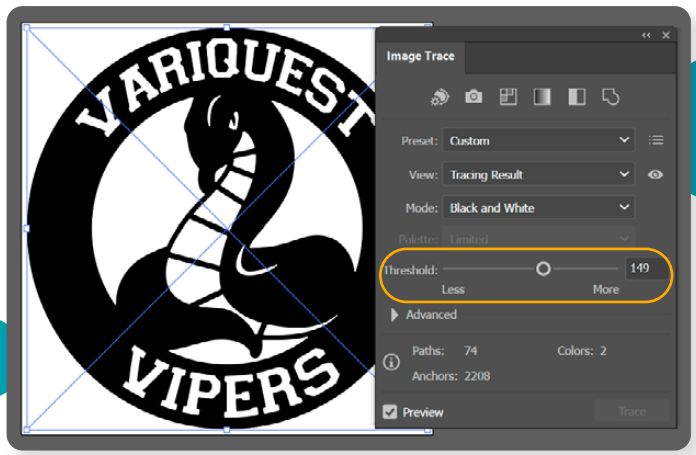
To trace a **flat image** (such as a JPEG or PNG file), in the newly created Adobe® Illustrator® document, go to **File**, click **Place**, browse out and select the desired image. Once the image is placed on the **artboard**, it can be traced manually by plotting individual **anchor points**, or the process can be sped up by using the **Image Trace** feature.

To utilize this feature, make sure the *Image Trace* panel is open in the document's workspace by going to **Window** and selecting ***Image Trace***.

1. Select the image that has been placed on the artboard
2. Open the ***Image Trace*** panel
3. Select ***Black and White Logo*** from the **Preset** drop-down menu

> ***Note:*** *It is important to stick to only 2 colors when designing a cut shape. One color (in this case - black) will represent the main shape, while the second color (white) designates the relief areas that will be cut away.*

4. Toggle the ***Threshold*** slider to desired effect



> ***Note:*** *The desired effect in this step should consider the criteria discussed later in the Formatting section.*

5. Expand the ***Advanced*** section in the **Image Trace** panel and make sure the ***Overlapping*** method is selected

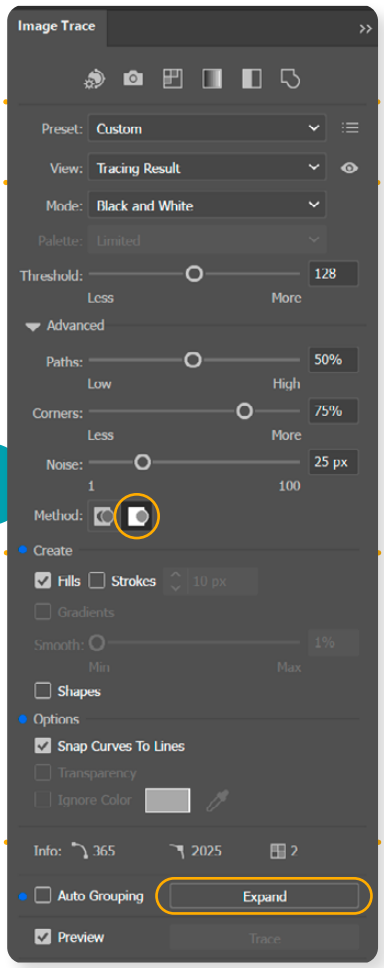
*Note: Adobe® Illustrator® must be updated to Version 2025 (29.0 or higher) in order to access the **Advanced** section of the Image Trace Panel.*

6. Once the the desired effect has been achieved, click the **Expand** button on the *Image Trace* panel; or go to **Object**, select **Image Trace,** and click ***Expand***

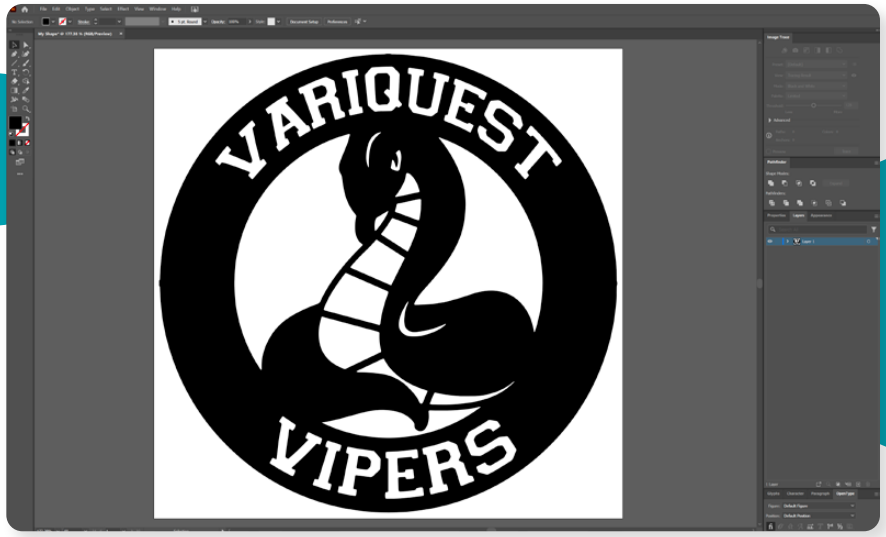
7. Right click on the expanded image and select **Ungroup** (Ctrl+Shift+G)

8. Select the background and **delete** any object surrounding the image

*Note: The Image Trace feature creates objects out of all elements in an image—for example—a PNG image of a circular logo, although it may have a transparent background, will render the blank space around an image as a white **object**. This object needs to be deleted, or the Cutout Maker will treat the outline as a path to be cut.*



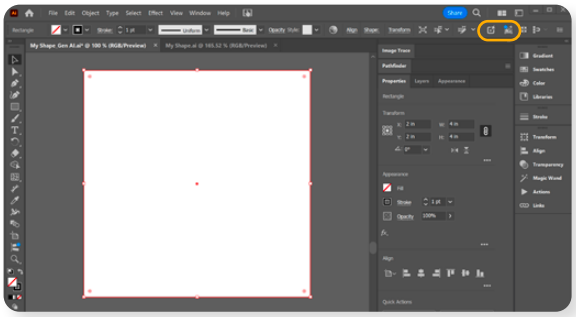
The resulting image is now ready to be tweaked and formatted into a compatible shape that can be imported into the **VariQuest® Design Center software** and cut with the VariQuest Cutout Maker 2800 MyShape™ feature. See the Formatting section for more details.



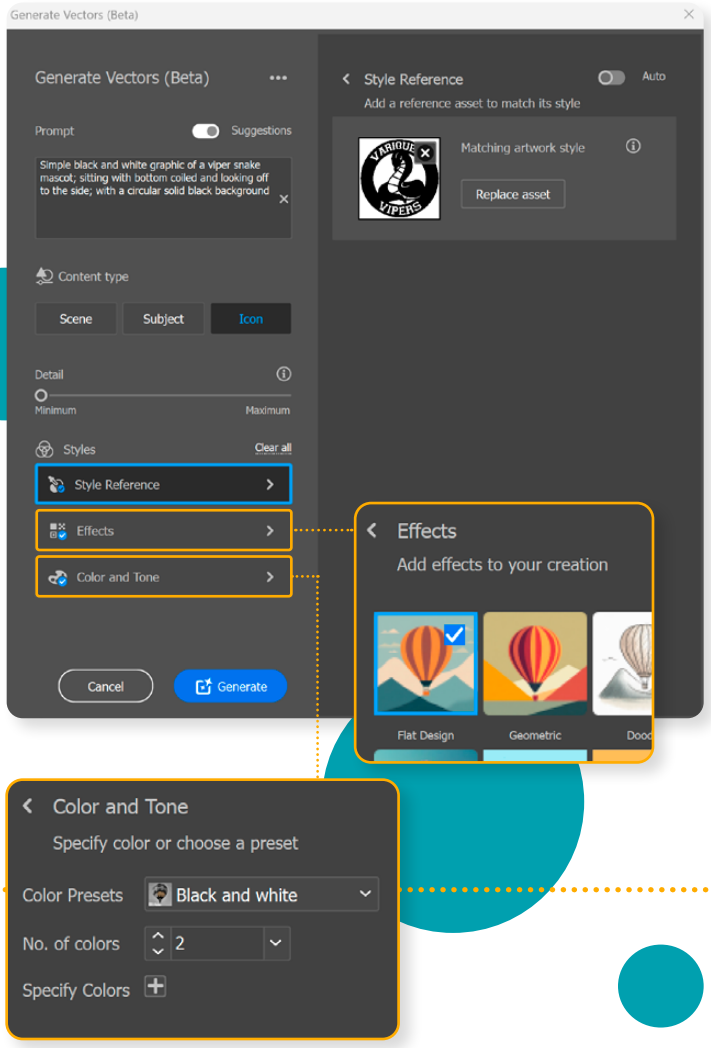
Designing a Shape Using *Generative AI*

Using Adobe® Firefly® technology, Adobe Illustrator® offers generative AI as a way to generate **vector graphics** with a simple prompt. When the right process is followed, these vector graphics may be converted to cut shapes compatible with the Cutout Maker 2800 MyShape™ feature. This section walks through the recommended process for using generative AI with Adobe Illustrator Version 2025.

To use generative AI to create a vector graphic for desiging **basic shapes**, use the ***Rectangle*** tool (M) to draw a rectangle shape that encompasses the entire **artboard**.



1. Making sure the rectangle shape is selected, click the ***Enhanced Text to Vector Graphic*** button in the control bar at the top of the document
2. Enter a prompt and select preferences in the ***Generate Vectors*** dialogue box
   a. Type a clear, detailed prompt for the desired shape in the **Prompt** box
   b. Select ***Icon*** under **Content Type**
   c. Toggle the slider under **Detail** to ***Minimum***
   d. If possible, it is recommended to use a ***Style Reference*** from the **VariQuest® Design Center Software**—this can be achieved by taking a screenshot of a similar shape in the software, pasting it onto the current document, converting the screenshot to a vector graphic using **Image Trace** (*See* Designing a Shape Using Image Trace), and selecting the resulting graphic as the **Style Reference** in the **Generate Vectors** dialogue box
   e. Select ***Flat Design*** as the **Effect**
   f. Choose the ***Black and White*** preset under **Color and Tone**, and select ***2*** as the **No. of Colors** for the image



Note: It is important to stick to only 2 colors when designing a cut shape. One color (in this case - black) will represent the main shape, while the second color (white) designates the relief areas that will be cut away.

3. Once all selections are made in the **Generate Vectors** dialogue box, click ***Generate***

4. Review the variations generated in the ***Properties*** panel and select the most desirable option

> ***Note:*** *If none of the options presented are suitable, click* ***Generate*** *again. If a desirable option still has not been generated, consider tweaking the prompt text or choosing a different* ***Style Reference,*** *and generate again.*

5. **Expand** the newly generated image by selecting the artwork, going to **Object** and selecting ***Expand***

> ***Note:*** *If Expand is disabled in the Object menu, click* ***Expand Appearance****—go back to Object and select Expand.*

The resulting image is now ready to be tweaked and formatted into a file that will create a compatible shape that can be imported into the VariQuest software and cut with the VariQuest® Cutout Maker 2800 MyShape™ feature. See the Formatting section for more details.

Designing a Shape Using an Existing Vector Graphic

If a vector file already exists for an image, some additional formatting may be necessary to convert the graphic into a cut shape compatible with the Cutout Maker 2800. Depending on the complexity of the file, this avenue may require the most amount of design skill and experience working with vector graphics and the Adobe® Creative Suite®.

> ***Note:*** *A simplified method of working with a pre-existing vector graphic may be to* ***Rasterize*** *(***Object*** *>* ***Rasterize****) the image and follow the steps for Designing a Shape Using Image Trace.*

A best practice when working with a pre-existing **vector graphic** is to first open the file in another Adobe Illustrator® window.

1. Locate any objects with a ***gradient*** **fill** and replace with a solid fill color

> ***Note:*** *Objects with a gradient fill, if not converted to a solid fill, will be expanded upon import and appear inverted in the software, causing the shape to fail to cut properly.*

2. Identify any **objects** that have a ***Mesh* effect** applied. These objects need to be either deleted or **Rasterized** (**Object** > ***Rasterize***) and re-converted to a vector shape using the **Image Trace** feature (*See* Designing a Shape Using Image Trace)

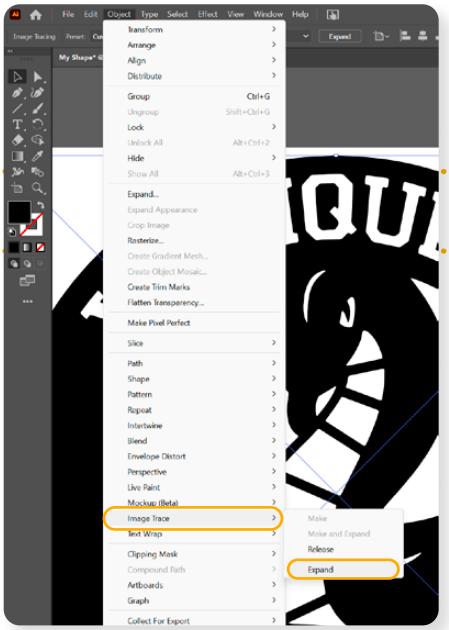
Note: *Objects with a Mesh effect applied will appear distorted in the software and fail to cut properly.*

3. Identify and release any **Clipping Masks** used in the document by selecting the artwork, right-click on the image, and choosing ***Release Clipping Mask***

Note: *The VariQuest software does not recognize Clipping Masks and will cut any objects hidden by a mask.*

4. Make sure all objects with a **stroke** have a ***Uniform* Variable Width Profile** and the **Brush Definition** is set to ***Basic***—any other stroke type will not import properly to the VariQuest® software

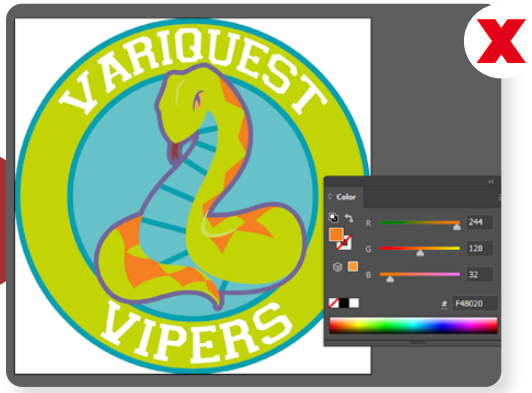
5. To ensure that no other effects are applied to the image, select everything on the **artboard** (Ctrl+A), go to **Object**, click **Expand**, make sure all available options in the *Expand* dialog box are checked and click ***Okay***



> ***Note:*** *If Expand is disabled in the Object menu, click* ***Expand Appearance****—go back to Object and select Expand.*

6. Once all elements in the graphic have been converted or expanded, copy the artwork to the new document, and resize to fit the artboard created at the shape's **minimum cut size**

7. If the graphic is not already a two color graphic, it will need to be manually converted to a black and white image by changing the fill color of all objects on the artboard to either black or white—keeping in mind that objects in black will be the main shape, and white objects will be relief cuts that fall away when the shape is lifted off the cutting mat.



The resulting image is now ready to be tweaked and formatted into a file that will create a compatible shape that can be imported into the **VariQuest® Design Center software** and cut with the VariQuest Cutout Maker 2800 MyShape™ feature. See the Formatting section for more details.

FORMATTING

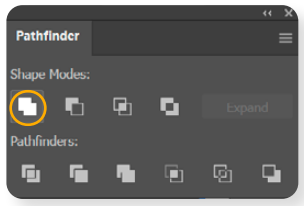
Although the files created in the previous section technically can be read and cut by the Cutout Maker 2800, further formatting is necessary in order to create a shape that cuts efficiently and that keeps the integrity of the image.

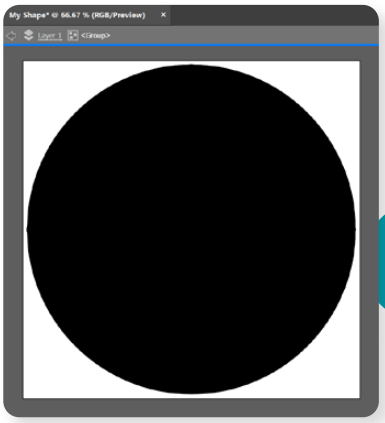
Creating a Solid Background

Following the previous design scheme, objects with black fill will be the main shape, while white objects will be cut away and discarded. Due to the way the Cutout Maker reads vector **paths**, the graphic needs to contain a solid background object—this will be the path that cuts the outline of the shape and must be a **closed polygon**. If this is not already included in the artwork, the black objects on the artboard need to be combined to make one solid background shape.

Note: *Make sure all relief cuts are objects with white fill. Double check to confirm that none of the black objects contain any* **compound paths** *that appear white on the artboard. To convert a compound path to an object, draw an object with white fill over the path, send the object to the* ***back*** *of the artboard (Ctrl+Shift+[), and click the* ***Trim*** *button in the* Pathfinder *panel. Ungroup (Ctrl+Shift+G) the resulting objects and proceed to Step 1.*

1. Using the ***Magic Wand*** tool (Y), click the black background to select all objects with **black fill**
2. Click the **Unite** button in the **Pathfinder** panel (**Window** > ***Pathfinder***)
3. Switch back to the **Selection tool** (V), double-click on the black object to enter **Isolation Mode**
4. Delete all paths and **anchor points** **inside** the main object, resulting in a solid black shape





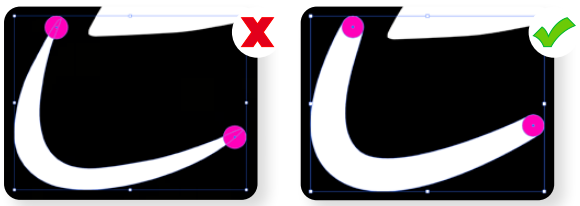
5. Click the back arrow in the upper left-hand corner of the pasteboard twice to exit *Isolation Mode*
6. Send the solid black shape to the back of the artboard to reveal the white shapes by right clicking on the selected object, clicking **Arrange**, and selecting ***Send to Back*** - or by using the keyboard shortcut **Ctrl+Shift+[**

Guidelines for Manipulating Relief Cuts

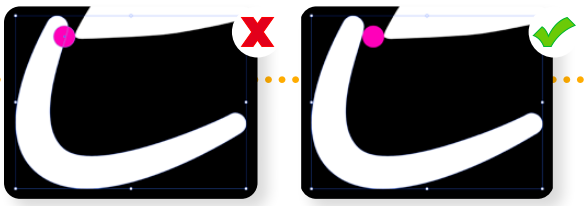
Now that the background is a solid shape, the white objects need to be manipulated to make it easier for the Cutout Maker to make accurate cuts that keep the integrity of the original image.

Here are a few guidelines to keep in mind:

- **4″ by 4″** is a good ***starting*** point for the **minimum cut size** of most ***simple*** shapes.
  - » If, at any point in the design process, the following guidelines seem to compromise the integrity of the image, try **increasing** the ***minimum cut size***.
- At the image's minimum size, all inside cuts need to be at least **1/16″** wide.
  - » Use a .0625 in circle to test if needed (or a 4.7pt stroke if making a line to expand).
  - » An inside cut narrower than 1/16″ will run the risk of tearing while cutting, making a distorted cut, or not cutting at all.

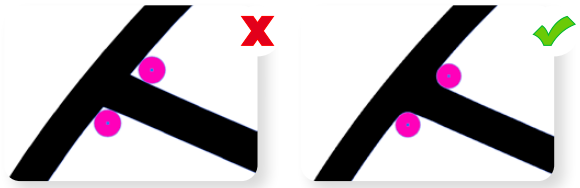


- Relief cuts need to be at least **1/16″** apart and away from any edges.
  - » Cuts that are too close together (or to the edge) can cause the paper to tear while cutting, or will create a weak connection that can easily be broken.



- All text must be **Expanded** (**Object** > ***Expand***).
  - » Any text created with the **Type** tool that hasn't been expanded will not preview in the software, and will not cut.

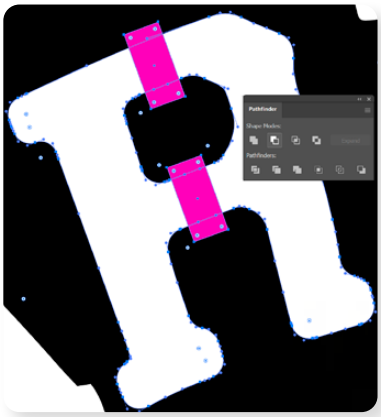
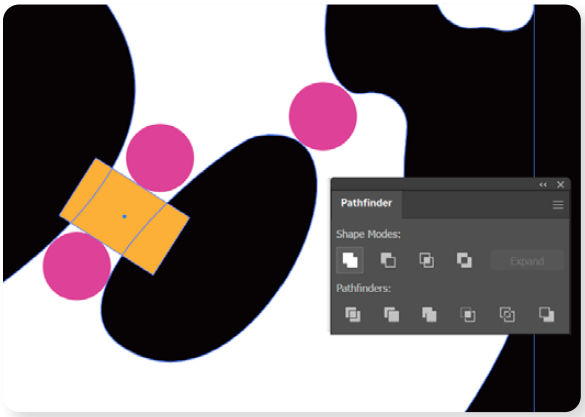
- Rounding off corners will give a more accurate depiction of what the shape will look like when cut.
  - » Sharp angles will automatically be rounded off when the file is run through the VariQuest® software.
  - » Keep the 1/16″ limitation in mind when working with sharp angles and corners.

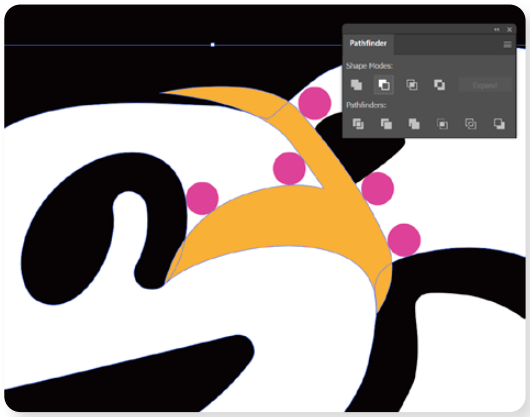


- Unless a shape is being designed specifically for vinyl cutouts, all areas in black need to be connected to the main shape.
  - » Any part of the black background that is fully surrounded by a white shape will fall away from the main shape when lifted off the cutting mat. Common examples of this include:
    - Lettering inside a shape
    - Borders or backgrounds inside a shape
    - Spots or freckles
    - Noses and eyes

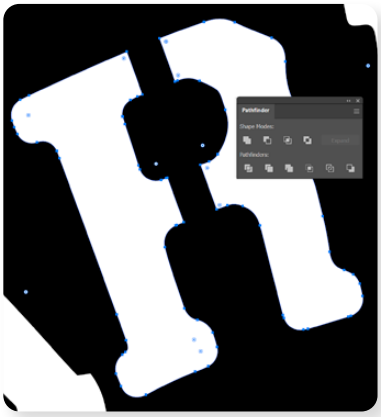
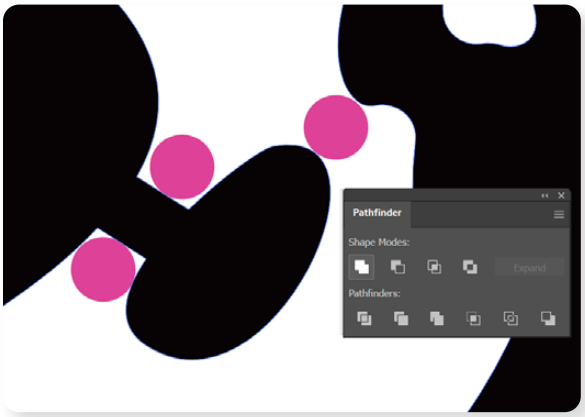
» While some non-essential objects may need to be removed altogether, most common issues can be resolved by creating a bar, or other organic shape, and subtracting it from the white object to make a connection back to the main shape.

1. Use the ***Rectangle*** tool (M) or the **Pen** tool (P) to draw a bar (or other organic shape) at least 1/16″ wide

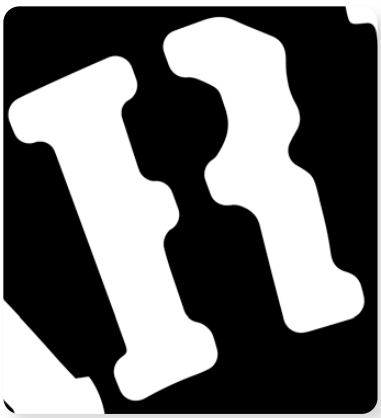





2. Select the bar and white object, then click ***Minus Front*** button in the **Pathfinder** panel

3. Make sure sharp edges are rounded out, keeping the 1/16″ limitation in mind



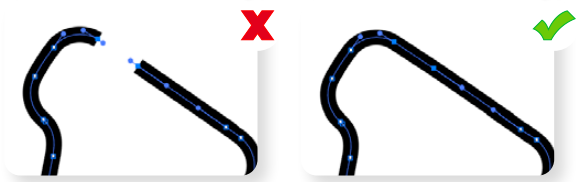
4. If the result is not satisfactory, continue to manipulate anchor points using the **Direct Selection tool** (A) until desired effect is achieved

TIP: *When creating text for a cut shape, considering using a stencil font, such as **GarretVQ Stencil**.*

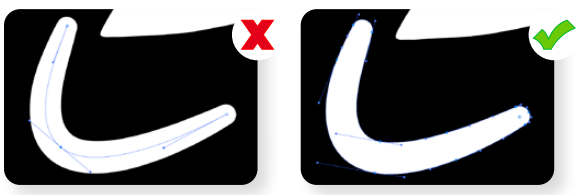
- Make sure any long, thin elements of the design are broken up and anchored to the main shape.
  - » Long, thin pieces or cut outs are more difficult for the Cutout Maker to cut without tearing (horse legs, cow tails, etc.). Attaching these pieces back to the main object can often make the image more functional.
  - » The same concept is applicable to inside cuts—relief cuts that aren't broken up in enough places will create a flimsy cutout that can easily be broken and torn.
  - » Use the same methods from the previous guideline to ensure the relief areas have enough connections to create a sturdy, solid shape.



- Make sure all objects in a shape are **closed polygons**.
  - » It is important to make sure all anchor points in an object are ***joined*** to create a complete shape. Any gaps between anchor points, or anchor points that are not joined to complete a closed polygon will register as a **line** rather than a relief cut.
    - To close an incomplete polygon, select the two anchor points that are not connected with the ***Direct Selection*** tool (A), right-click and select **Join**, or use the keyboard shortcut **Ctrl+J**.

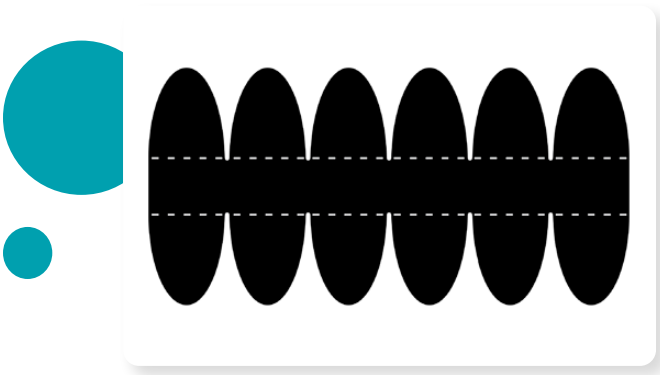


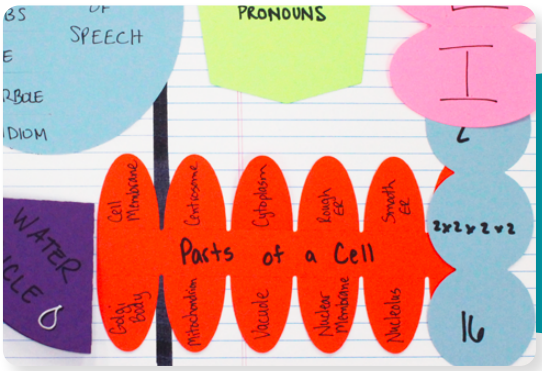
  - » Any line with a stroke that is intended to be a relief cut needs to be ***expanded*** to an object.
    - The VariQuest® software does not register the **weight** of a stroke, and will only cut a slit in the material along the line path. To expand a stroke, select the line, go to **Object**, and click ***Expand***.



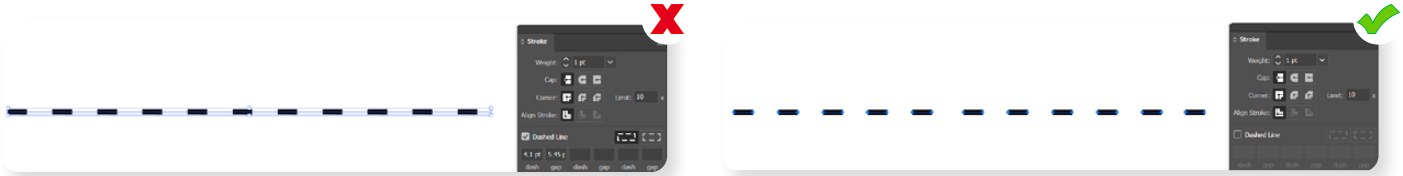
Note: *Paths with a heavy stroke setting that have sharp angles, or any path that crosses over itself, will convert to a shape that has overlapping outline paths when expanded. These objects need to be united (select object and click **Unite** button in the Pathfinder panel) in order to create a solid object.*

- **Lines** are typically only used in cut shapes to create a dashed, perforated edge for folding.

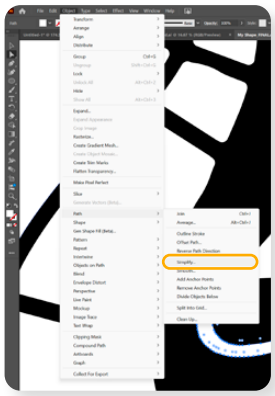




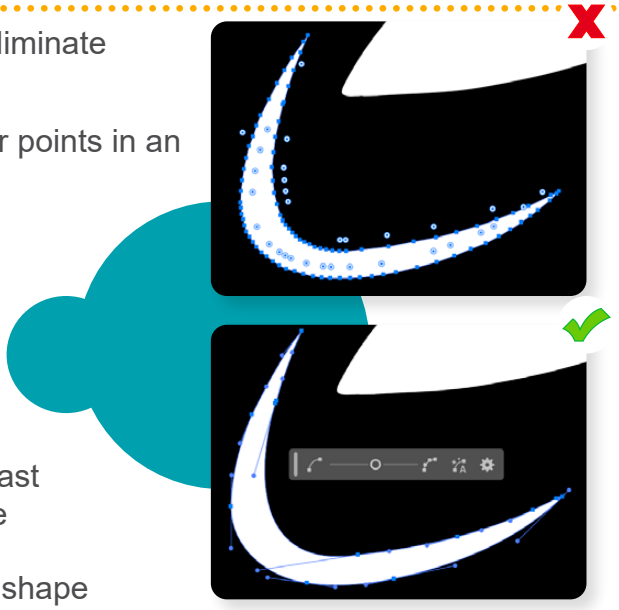
Note: *The VariQuest software does not recognize a **Dashed Line** effect applied to a stroke. Dashed lines must be created manually with individual line segments.*



- Try to simplify the images as much as possible.
  - » There should be as few anchor points as possible to eliminate blade movement.
  - » An easy way to quickly decrease the number of anchor points in an object is to:



1. Select the path, or paths
2. Go to **Object**
3. Click on **Path**
4. Select ***Simplify***
5. Toggle the slider until the least amount of anchor points are present on the path without affecting the integrity of the shape



Once a shape has been properly formatted, and the above guidelines have been met, the file needs to be finalized and saved in a format the Cutout Maker 2800 can process.

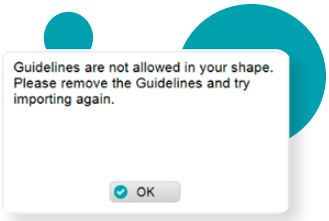
SAVING & EXPORTING

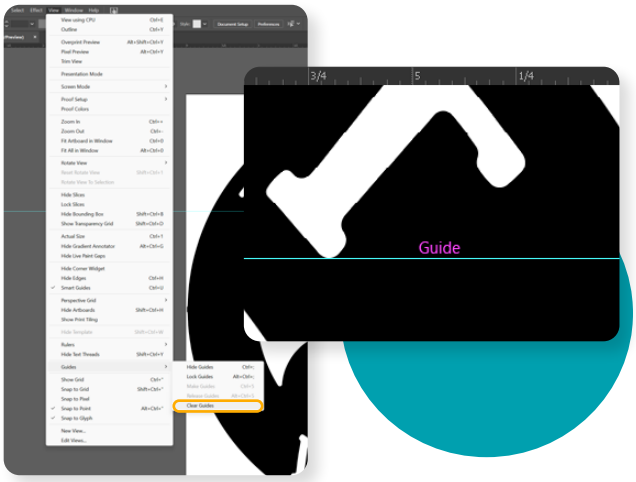
At this stage in the design process, all the objects for the shape are present and in their final position on the artboard, but now they need to be layered in the right order.

Document Clean-Up

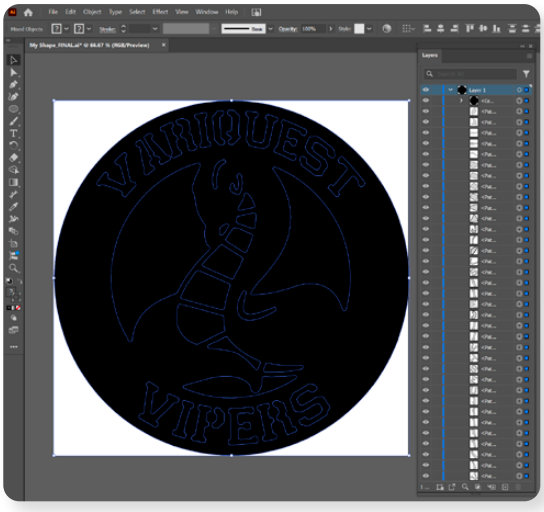
Before saving the final file, make sure to delete any unnecessary elements used or created in the design process.

- Look for, and delete any invisible paths (a path without a fill or stroke color that appears hidden).
  - » Use the keyboard shortcut **Ctrl+A** to select all objects on the artboard and look for objects that don't belong.
  - » Go to **View** and select ***Outline (Ctrl+Y)*** to see all paths on the artboard in **Outline Mode**.
- ***Delete any and all guides present in the document.***
  - » Document guides may be used during the designing process, however they ***MUST*** be deleted before saving, or the software will generate an error message and deny the file for import.
    1. Go to **View**
    2. Click **Guides**
    3. Select ***Clear Guides***





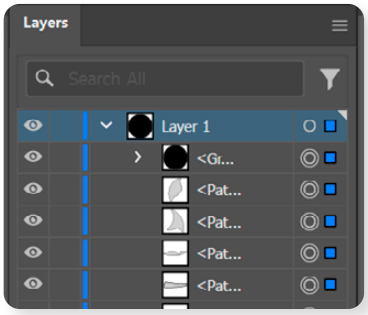
Object Layering



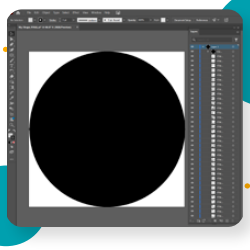
It is important to save the file with the object layers already set up for the correct ***cut order***.

The Cutout Maker will always cut from the bottom layer to the top layer in the **Layers** panel. Order the individual shapes in the most efficient way possible to enhance cut time and to minimize blade movement—starting at the top most shape and ordering left to right. When possible, the smallest objects should be cut first, and larger objects toward the end.

The main shape should *always* be to the ***front*** (the **top** layer in the ***Layers*** panel) to minimize the amount of unnecessary movement of the paper.



- The outline of the main shape should be the last object cut. If the outline is cut earlier in the process, it could cause the paper to shift and tear while cutting the rest of the shape.



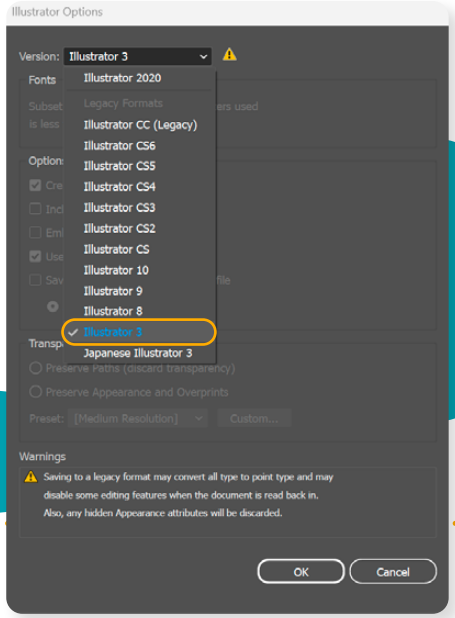
Note: *When the main shape (which, in this demonstration is a solid black object) is moved to the top layer in the document, it may appear to obscure the rest of the objects on the artboard.*

File Formatting

Now that the shape has been designed, formatted, cleaned up and properly layered, it is ready to be saved to its final file format.

The **VariQuest® Design Center Software** currently only supports Adobe® Illustrator® files saved down to *Illustrator Version 3*. To save a file down to ***Illustrator 3*** from the current version of Adobe Illustrator:

1. Go to **File**
2. Select ***Save As...***
3. Choose the desired file location and enter a unique name that describes the shape
4. Select **Adobe Illustrator (*.AI)** from the *Save as type* drop-down menu
5. Click **Save**
6. Select ***Illustrator 3*** from the **Version** drop-down menu in the *Illustrator Options* window
7. Click **OK**



Note: *A message window may pop up with a warning about editing features being disabled when saving to a legacy format. Click **OK** to disregard.*

Once saving is complete, the file is ready to be imported into the Design Center Software, via the MyShape™ function.

Exporting

Be sure to save a copy of the final shape file on the Desktop, or in an easily accessible location.

If the newly designed shape is going to be installed on another device (for example, the **Design Center 2300**), the easiest way to transfer the file is to copy it onto an external flash drive.

IMPORTING

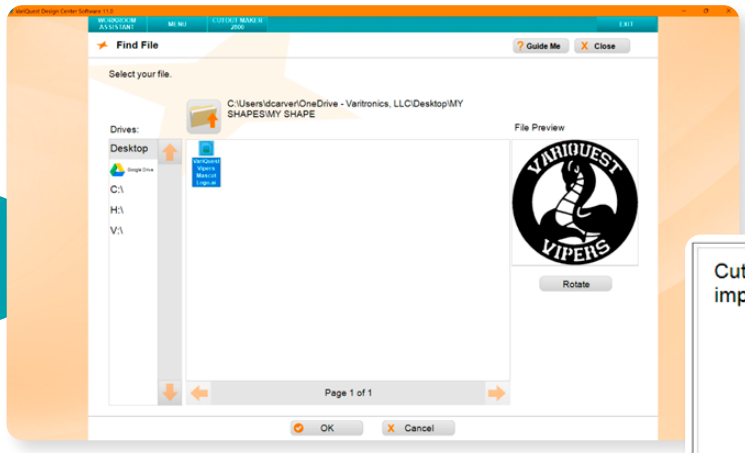
Importing a Shape Using the MyShape™ Feature

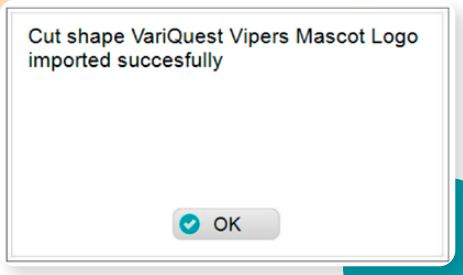
To begin uploading a shape to the **VariQuest® Design Center Software**, make sure the *Cutout Maker 2800* is connected to the **Design Center 2300** (or other device with the VariQuest software installed), and powered **ON**. Insert flash drive, if using.

1. Open the ***VariQuest Design Center Software***
2. Click on the ***Cutout Maker 2800*** button

   Note: The MyShape feature is not available for the Cutout Maker 1800.

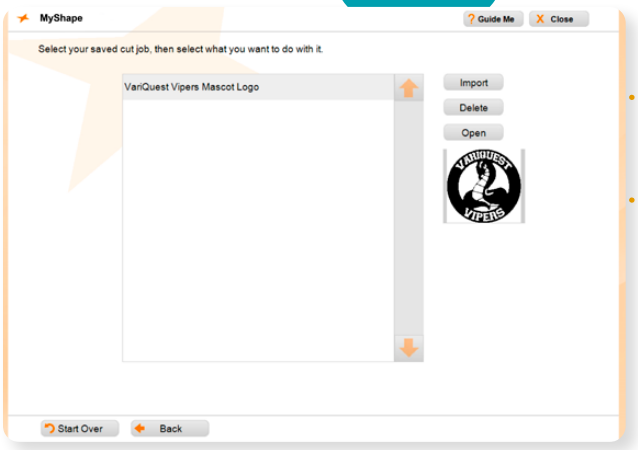
3. Click the ***MyShape***™ button on the **Output Type** screen
4. Select ***Import*** on the right side of the **MyShape** page
5. Browse out to, and select the Adobe® Illustrator® file





6. Click **OK**
7. A message window will open, indicating a successful import—click **OK**

   Note: If the software issues an error message, see the Troubleshooting section to identify and fix the issue, then re-save and import again.



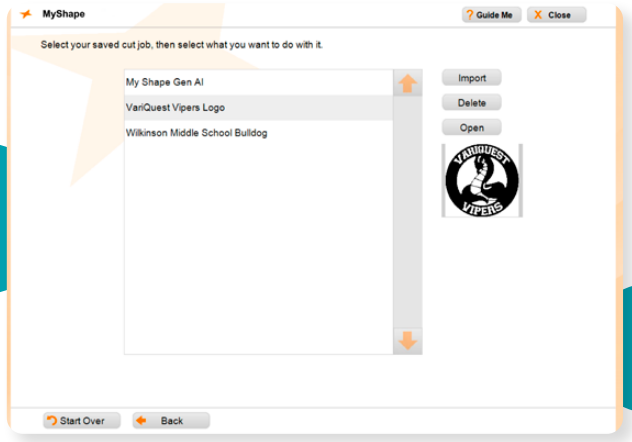
Once the shape has been successfully imported, the software will return to the MyShape screen. From this page, one can either ***Open*** the shape and proceed to cut, ***Delete*** the shape, or ***Import*** another shape.

Finding an Imported Shape in the Software

All imported shapes will be saved to, and can be opened from the **MyShape**™ screen—however, any shape imported using the MyShape feature will also be available in the Cutout Maker 2800 software in the ***-My Shapes*** category with its own unique **Search ID**.

- To access a custom shape from the **MyShape** page:

1. Open the VariQuest® Design Center Software
2. Click the ***Cutout Maker 2800*** button
3. Select the ***MyShape*** feature button
4. Locate and select the custom shape from the list of installed shapes
5. Click ***Open*** and follow the on-screen prompts



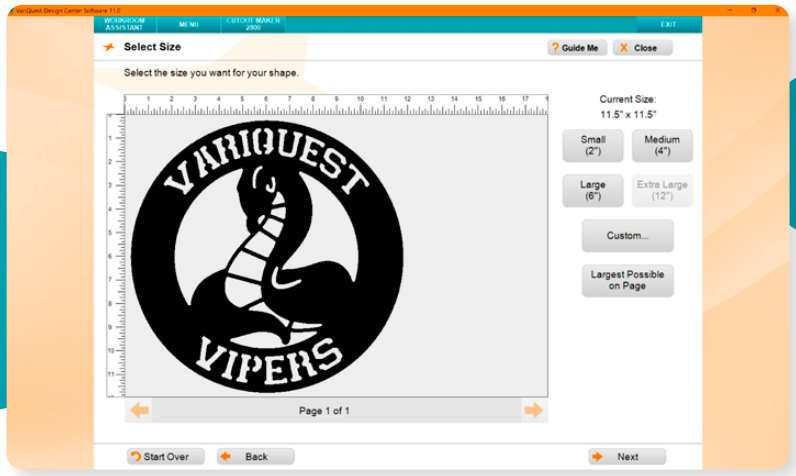
- To access a custom shape from the **Shapes** page:

1. Open the VariQuest Design Center Software
2. Click the ***Cutout Maker 2800*** button
3. Select the ***Shapes*** button
4. Choose ***Browse Categories***
5. Click on the ***-My Shapes*** category at the top of the Categories list
6. Select the ***Your Imported Shapes*** Subcategory
7. Locate the shape from the thumbnail list on the right
8. Click ***Okay*** and follow the on-screen prompts

- To access a custom shape using its unique **Search ID**, repeat steps 1-7 for accessing a shape from the *Shapes* page and make a note of the **ID#** at the top of the pop-up window.

1. Open the VariQuest® Design Center Software
2. Click the ***Cutout Maker 2800*** button
3. Select the ***Shapes*** button
4. Choose ***Search by Keyword***
5. Enter the shape's ***Search ID***
6. Click ***Next***
7. Select the shape, click ***Okay*** and follow the on-screen prompts

Once an imported shape has been added to a **cut job**, follow the on-screen prompts to customize the size and number of shapes, add shapes or letters, and proceed to load paper and follow the prompts on the Cutout Maker 2800's LED screen in the same manner as any regular cut job.

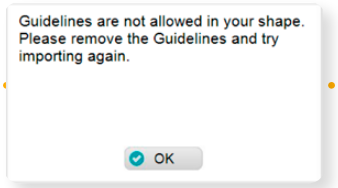


TROUBLESHOOTING

If, after following the instructions detailed in this guide, a shape fails to import, or does not cut correctly, refer to the troubleshooting tips below.

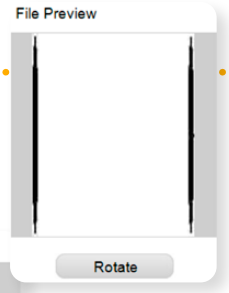
Troubleshooting Tips

- **An warning message regarding a potential error in the file appears when attempting to import a shape**



  - » Check the thumbnail in the *File Preview* window to make sure the shape is previewing correctly. If the image is blank or distorted, continue to ***The File Preview thumbnail appears blank or distorted when file is selected for import***.
  - » If the *File Preview* image looks correct, click the button to disregard the message and import anyway. Proceed to cut the shape to test for any other errors addressed in the following *Troubleshooting Tips*.

- **The *File Preview* thumbnail appears blank or distorted when file is selected for import**



  - » Check to make sure the file type is correct. See *File Formatting* in the Saving & Exporting section for instructions on saving an **Adobe® Illustrator®** file down to ***Illustrator 3***.
  - » Confirm that no **guides** are present in the document. See *Document Clean-up* in the Saving & Exporting section for more information.
  - » Make sure all objects are **closed polygons**. See *File Formatting* in the Saving & Exporting section.
  - » Double check the artwork for any applied **effects** or styles that may have been missed. See *File Formatting* in the Saving & Exporting section for more information.
  - » If none of the suggestions above fix the issue, try manually tracing over the image with the pen tool set to basic and save the new artwork in a clean document.

- **An error message regarding File Type appears when attempting to import a shape**
  - » Check to make sure the file type is correct. See *File Formatting* in the Saving & Exporting section for instructions on saving an **Adobe Illustrator** file down to ***Illustrator 3***.

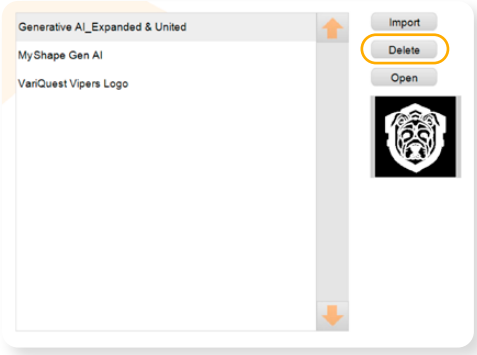
***BONUS* TIP: If the art for a custom shape is saved as an *SVG* file, open the file in Adobe Illustrator and re-save the file as *Adobe Illustrator 3*.**

- **The shape appears inverted in the preview thumbnail when imported**

  - » Create a new **layer** in the document, cut and paste the artwork into the new layer, delete the original layer.
  - » Check to make sure there is not an **object** or **path** surrounding the artwork.
  - » Re-save and try to import the shape again.
  - » If none of the suggestions above fix the issue, try manually tracing over the image with the pen tool set to basic and save the new artwork in a clean document.

- **No confirmation message window appears when importing a shape and screen returns to MyShape™ page**
  - » Check the MyShape list for the file intended for import, as it may have already been uploaded to the software.

- **An imported shape does not cut as intended and needs to be replaced**



  - » If a problem has been identified with a shape that has already been imported using the MyShape feature, locate and select the shape in the list on the MyShape home screen, and click ***Delete***. Open the Adobe® Illustrator® file, make the necessary changes, re-save the file down to Illustrator 3, and ***Import*** again through the MyShape feature.

- **The Cutout Maker cuts the same object multiple times**
  - » Confirm each object has only one **path**, there are no **objects** layered on top of each other, and there are no **compound paths** in the document.

Note: *When using the* **Image Trace** *feature, if* **Abutting** *is the selected method in the Advanced section instead of* **Overlapping**, *the resulting artwork will contain cutout paths rather than stacked paths. This means each object in the graphic will contain its own path as well as the compound path of the object surrounding it, resulting in the Cutout Maker making the same cut around an object* ***twice***.

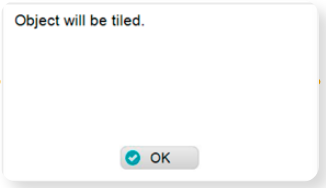
  - » Check for objects with no **fill** or **stroke** that appear hidden when not in **Outline Mode**. See *Document Clean-up* in the Saving & Exporting section for more information.

- **Some elements of the shape are cutting smaller, shorter, or rounder than intended**

  » Increase the size of the shape in the artwork file. Re-save the file, delete the previous version of the shape in the software, and import the updated file. See *Document Setup* in the Getting Started section for information on **minimum cut size**.

  ***BONUS* TIP:** *Try testing this in the software first. Add the shape to a cut job several times, increasing the size of the shape each time. Make a note of which size cuts the most accurately, and adjust the minimum cut size in the artwork accordingly.*

- **The software issues a warning that the object will be tiled when added to a cut job**



  » The size of the shape is too large to fit on one sheet of 12″ x 18″ Cutout Maker media.

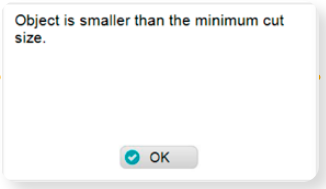
  - Test cut the shape at a smaller size. If the result is acceptable, decrease the **minimum cut size** of the shape in the artwork file and import again.

  ***BONUS* TIP:** *Due to the safety margins in the Cutout Maker's programming, a best practice is to design a single cut shape no larger than **11.5" x 17.5"** to avoid shrinking the minimum cut size when a shape is added to a cut job.*

  - If the shape is intended to be larger than 12″ x 18″, manually split the shape into two pieces, and save out as two separate shapes.

Note: *If a shape is larger than 11.5" x 17.5" and the warning message is dismissed, the software will arbitrarily split and tile the shape on its own—often with less than satisfactory results.*

- **The software issues a warning that the object is being cut smaller than the minimum cut size when added to a cut job**



  » Dismiss the warning to test cut the shape at a smaller size. If the result is acceptable, decrease the **minimum cut size** of the shape in the Adobe® Illustrator® file and import again.

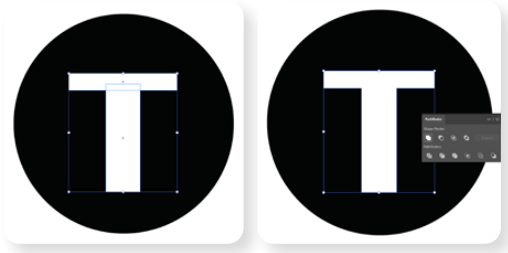
  » If the result of the test cut is not acceptable, refer to the *Guidelines for Manipulating Relief Cuts* in the Formatting section to modify the problem areas, or proceed to cut the shape at a larger size.

- **Dashed lines cut as a solid line**

  » Make sure dashed lines consist of individual **line** segments, and not a dashed stroke **effect**.

  - The VariQuest® software does not recognize a *Dashed Line* effect applied to a **stroke**. Dashed lines must be created manually with individual line segments. See *Guidelines for Manipulating Relief Cuts* in the Formatting section for more information.

- **Objects cut into each other in unintended ways**
  - » Make sure there are no overlapping **paths** on the **artboard**.
    - Check to make sure there are no paths without a **stroke** or **fill** in the document, as paths that aren't visible will still register and cut—see *Document Setup* in the Getting Started section.
    - Unite overlapping **objects** intended to cut as one. Select all objects that need to be combined, then click the **Unite** button in the **Pathfinder** panel.
    - Check to make sure that any objects with a weighted stroke that have been expanded do not overlap any other paths.



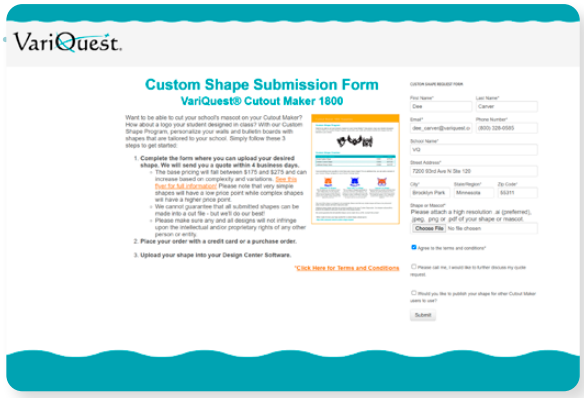
Note: When a **closed polygon** *with a* **weighted stroke** *and a fill is* **expanded**, *the individual objects generated for the stroke and the fill color will overlap. See the* Formatting *section for designing guidelines.*

- **Text is not present and does not cut**
  - » Make sure all text in the Adobe® Illustrator® file has been **expanded**. The Cutout Maker does not register live text, all glyphs need to be converted to **objects** in order to cut. See *Guidelines for Manipulating Relief Cuts* in the Formatting section for more information.

Custom Shape Program

For those that haven't yet upgraded to the Cutout Maker 2800—or for the complex shapes that require a bit more assistance—the VariQuest® Custom Shape Program is available to all Cutout Maker customers! Complete the Custom Shape Request Submission Form to work directly with our graphic designer to turn a custom image into a fully qualified Cutout Maker shape!

View the Custom Shape Program Flyer for more information.



Support

Questions?

For further assistance with the MyShape™ feature for the Cutout Maker 2800, don't hesitate to reach out to the *VariQuest Technical Support Team*:

- **1-800-328-0585** *(ext 3)*
- tech_support@variquest.com

To inquire about the Custom Shape Program, contact *VariQuest Customer Service* at:

- **1-800-328-0585** *(ext 2)*
- customerservice@variquest.com

GLOSSARY

Anchor Point

In Adobe® Illustrator®, an *anchor point* is a point on a path that controls the shape and direction of the path.

Artboard

In Adobe Illustrator, an *artboard* is a blank canvas on which designs are created. Artboards are similar to pages in a word processing program.

Basic Shape

A *basic shape* is a single cut shape found in the Shapes portion of the VariQuest® Design Center Software for the Cutout Maker. Shapes with multiple layers and shapes grouped together to form a larger craft or project (such as a bulletin board or door decoration) are found in the Collections portion of the software.

Brush Definition

A brush in Adobe Illustrator is a custom template that can be used to change the appearance of a path's stroke. The *Brush Definition* drop-down menu allows one to view and select a range of brush options.

Clipping Mask

A *Clipping Mask* in Adobe Illustrator is a shape that defines the visible area of an image or artwork. It's a group of layers where the bottom layer, or base layer, determines what's visible.

Closed Polygon

In Adobe Illustrator, a *closed polygon* is a connected series of line segments that form a shape by joining the start and end points

Compound Path

A *compound path* in Adobe Illustrator is a path with holes that allow one to see objects and colors behind the path.

Cut Job

When going through the process of utilizing the Cutout Maker to make cutouts and decals, a *cut job* is the collection of shapes and letters selected to be cut during any given session. Once a shape is selected, an edit screen appears where one can change the size of the shape, choose the number of shapes in the job and add more shapes to the job. The option to save the cut job for future use is given before proceeding to cut the selected shapes.

Design Center 2300

The *VariQuest® Design Center 2300* is an easy-to-use touchscreen-enabled workstation that comes pre-loaded with the VariQuest Design Center Software required to operate the Cutout Maker.

Direct Selection Tool

The *Direct Selection* tool in Adobe® Illustrator® allows users to select, move, and modify specific points in a shape or path. This tool is useful for reshaping paths, adjusting anchor points, and editing text.

Effects

In Adobe Illustrator, an *effect* is a function that can be applied to objects to change their appearance.

Expand

In Adobe Illustrator, the *Expand* command converts text, lines, patterns, and shape strokes into vector shapes with outlines. The *Expand Appearance* command converts a line into the shape of the effect applied to it.

Fill

In Adobe Illustrator, a *fill* is a color, pattern, or gradient that can be applied to the inside of an object.

Flat Image

A *flat image* is an image that has been combined into a single layer. It is a non-editable graphic that cannot be manipulated by vector points.

Group/Ungroup

In Adobe Illustrator, *grouping* combines multiple objects into a single container, while *ungrouping* separates them again.

Guide

In Adobe Illustrator, *guides* are lines or dots that can be moved around a page to help with alignment and measurement. They are a built-in feature that are only visible in Illustrator and not in the final product.

Image Trace

Image Trace is a feature in Adobe Illustrator that automatically converts pixel-based images into vector artwork. This process is also known as autotracing.

Isolation Mode

Isolation mode in Adobe Illustrator allows one to focus on a single object or group of objects while dimming and locking the rest of the design.

Join

In Adobe® Illustrator®, the *Join* function connects paths at their intersection points and trims excess lines. It can also close gaps between open paths.

Layers

In Adobe Illustrator, *layers* are transparent folders that organize content like images, text, and artwork. Layers are stacked in the *Layers panel*, with the top layer appearing in front of the layers below.

Line

In Adobe Illustrator, a *line* is a path made up of anchor points at the beginning and end, connected by a path. Lines can be drawn using the Line Segment tool, the Pen tool, or the Pencil tool.

Minimum Cut Size

In the VariQuest® Design Center Software, the *minimum cut size* is the smallest size a shape has been qualified to cut at. This is the size the shape was designed at, and it is not guaranteed to produce a quality cut if an attempt is made to cut the shape smaller than the minimum cut size.

Object

An *object* in Adobe Illustrator is any item that a user creates or adds to a document. This includes shapes, paths, rasterized artwork, 3D objects, and placed files.

Outline Mode

Outline Mode in Adobe Illustrator is a view that shows vector paths as simple outlines. It can be useful for seeing the structure of an illustration, selecting shapes, and editing vector paths.

Path

A *path* in Adobe Illustrator is a series of line segments that can be straight or curved.

Pattern Stroke

A *pattern stroke* in Adobe Illustrator is a stroke that uses a pattern brush to fill in an object or its outline. A pattern brush is a group of objects that are repeated along a path, and the objects will stretch to match the shape of the path.

Rasterize

Rasterizing in Adobe Illustrator converts vector graphics into raster graphics, which are made up of pixels. To *rasterize* is to convert a vector graphic to flat image.

Selection Tool

The *Selection* tool in Adobe Illustrator is a tool that allows users to select, resize, and rotate objects, or groups of objects.

Stroke

In Adobe® Illustrator®, a *stroke* is a line or outline that defines the shape of an object, path, or text. Strokes can be customized in terms of color, thickness, and style.

Stroke Weight

In Adobe Illustrator, *stroke weight* is the thickness of the line or outline around an object. Strokes can be used to add detail, define shapes, or create borders.

Unite

The *Unite* function in Adobe Illustrator merges multiple shapes into a single object. It's located in the Pathfinder panel.

Variable Width Profile

The *Variable Width Profile* menu in Adobe Illustrator allows users to create and apply custom width profiles to strokes and paths.

VariQuest® Design Center Software

The *VariQuest Design Center Software* is a program that allows users to create custom visuals for classrooms and schools. This is the application used to operate the Cutout Maker, and where Cutout Maker 2800 users will find the MyShape™ feature.

Vector Graphic

A *vector graphic* is a graphic created using mathematical formulas, points, lines, and curves. Vector graphics are resolution independent, meaning they can be scaled to any size without losing quality.

VariQuest®

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