



Skycut EV24 with the Corel Draw Plugin

March 21, 2023

- **Do NOT read this entire manual...** unless you want to. But taking the time to familiarize yourself with the organization of the manual and the topics covered can assist you in finding the answers you might need.

It's not practical to print this entire manual because:

- It's a waste of paper and ink if you only ever need certain sections.
- The live links to videos and web sites in the manual will not work.
- This manual will be updated from time to time.
- You cannot search on individual words. Use **Ctrl+F** (or **command+F** on a Mac) to locate all instances of a particular term.

Also:

- Videos of interest can be found at the following link: [Skycut Support Videos](#)

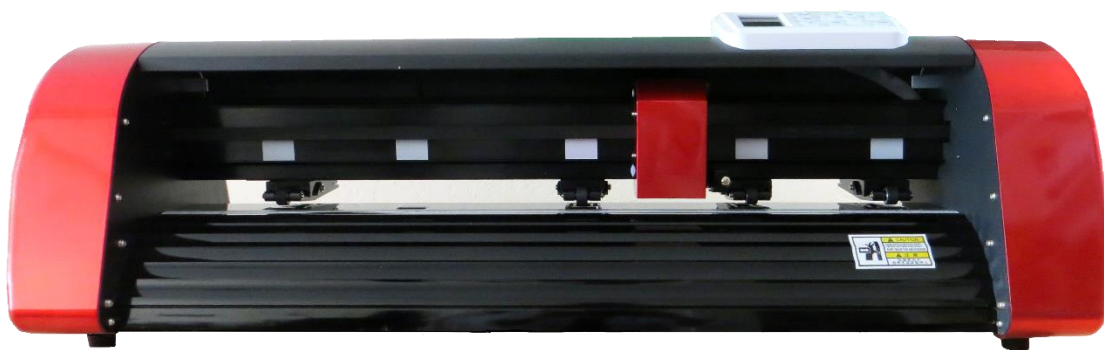


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1. Getting to Know Your EV24

1.0 Quick Reference for This Chapter

- How to use the control panel: *Section 1.9*
- How to adjust the blade holder: *Section 1.7.4*
- Where to position the pinch wheels: *Section 1.8*
- The cutting mat is too sticky (or not sticky enough): *Section 1.7.5*

Important Notes:

- Please read *Section 1.2* regarding safe operation of the Skycut.
- Report any damage or missing contents to your dealer promptly.
- Retain the original box and packing materials in case you ever need to ship your Skycut.

1.1 Support

- Thank you for choosing a Skycut EV24 digital die cutter. Before using a blade in your new cutter, we urge you to practice with the test pen, making sure you understand where shapes will cut.
- If you run into difficulties with the operation of your Skycut, turn off the power and look for a solution in this manual. Note that *Appendix A* is a **Troubleshooting** section. If you continue to have technical questions or issues, please contact your dealer as soon as possible.
- If anything is missing from your order or you have mechanical issues with your Skycut, please contact your dealer as soon as possible. You can also contact Skycut directly using this email address: skycut@skycut.cn.
- For additional information and support with the Skycut, please check out the following:
 - ◇ Skycut web site: <https://www.skycutcutter.com/>
 - ◇ Skycut Facebook page: <https://www.facebook.com/skycutcuttingplotter/>
 - ◇ Skycut Facebook group: <https://www.facebook.com/groups/Skycut>
 - ◇ Skycut YouTube channel: <https://www.youtube.com/channel/UCrPn5hFLbiRNDgccY8iXwoA/videos>

1.2 Safety and Warnings

Please be aware of the following safety guidelines when working with the Skycut:

- **Pinch Points:** Keep hands, long hair, loose clothing, jewelry, etc. away from the moving parts.
- **Risk to Children and Pets:** Please supervise children around the cutter when it is in use.
- **Movement and Touching:** Do not move the Skycut itself or touch any circuitry while it is plugged in.
- DO NOT attempt to move the blade carriage while the cutter is powered on.
- DO NOT touch or jam the plotter's track while it is operating.
- DO NOT shake the cutter while it is operating.
- DO NOT cut any materials that have staples or other embellishments attached.
- DO NOT touch the cutter with a magnet. It is safe, however, to cut magnetic materials, such as those used on refrigerators and car exteriors.

- DO NOT allow any liquids to spill or small items to fall into the cutter.
- Mount the EV24 on its included stand or place it on a sturdy and stable table, desk, or trolley.
- Always turn off the Skycut when not in use. Leaving the cutter turned on for extended periods of time can possibly damage the machine.
- Always turn off the Skycut before unplugging or removing the power cable from the wall outlet or power strip.
- Unplug the Skycut from a wall outlet or power strip during an electrical storm or when the cutter will not be used for an extended period of time.
- Transporting: When transporting the cutter, move the pinch wheel levers into the upward position. Remove the blade from the blade holder and cover the tip of the blade with the plastic cap.

1.3 Warranty

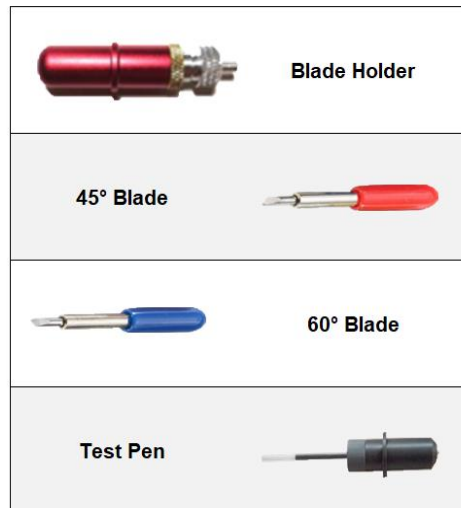
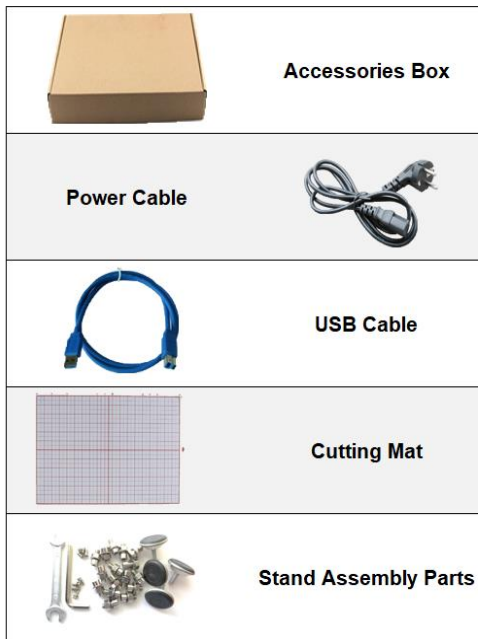
- ***IMPORTANT!*** If your Skycut is damaged during shipment or appears to be defective, your dealer should be notified as soon as possible.
- For additional information regarding your warranty, please refer to your Skycut dealer.
- It is recommended that you **retain the original box with packing materials** in case you ever need to ship your Skycut.

1.4 Unpacking

- Verify that you have received all contents. There is a checklist in *Section 1.05*. Please notify your Skycut supplier immediately if anything is missing.
- Remove all packaging before turning on the Skycut. Currently, the cutter ships with two end cap foam protectors, zip ties on either side of the blade carriage, and tape on either end of the cutting strip. **Be very careful when removing the zip ties – it's best to cut those ties from behind the machine versus in front.** Gently remove the tape at the ends of the cutting strip by rolling the tape away. Do not pull straight up.
- Because the cutting mat must be folded over to fit into the box, it may have become slightly rounded during shipping. Gently and only partially roll the mat in the opposite direction to remove the roundness and place on a flat table to make sure the mat now lies horizontally to the surface. Refer to *Section 1.7.5* for additional instructions on preparing the mat for use.
- Use the enclosed test pen as you experiment and become familiar with operating the Skycut. Place scrap paper on the mat and simply draw shapes rather than cut them. This will prevent possible damage to the blade, mat, and cutting strip as you learn where shapes will cut and the basic operating procedures.

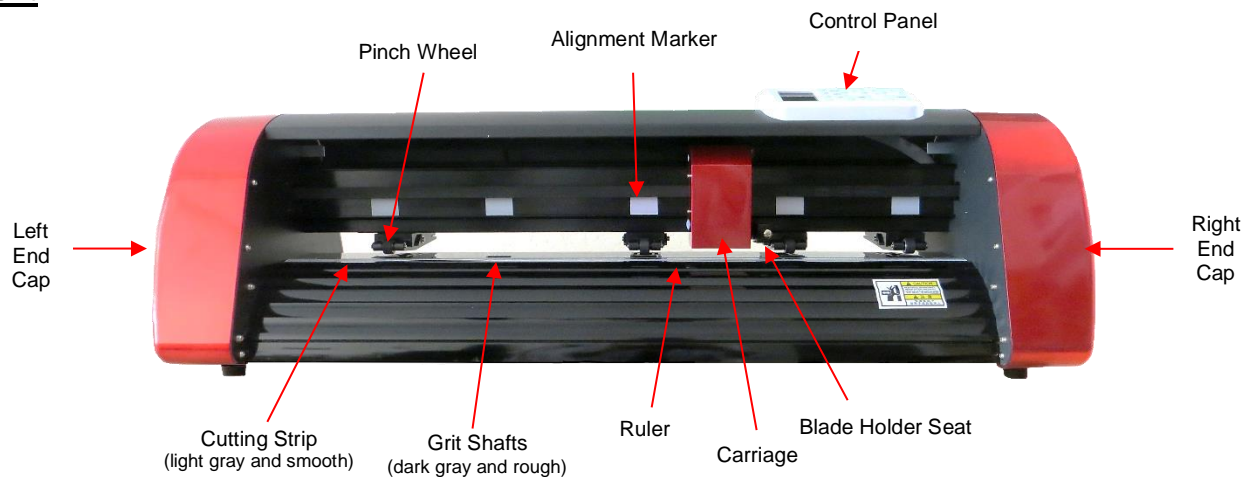
1.5 Contents

- Besides the EV24 cutter and cutter stand, your box should also contain the following items:



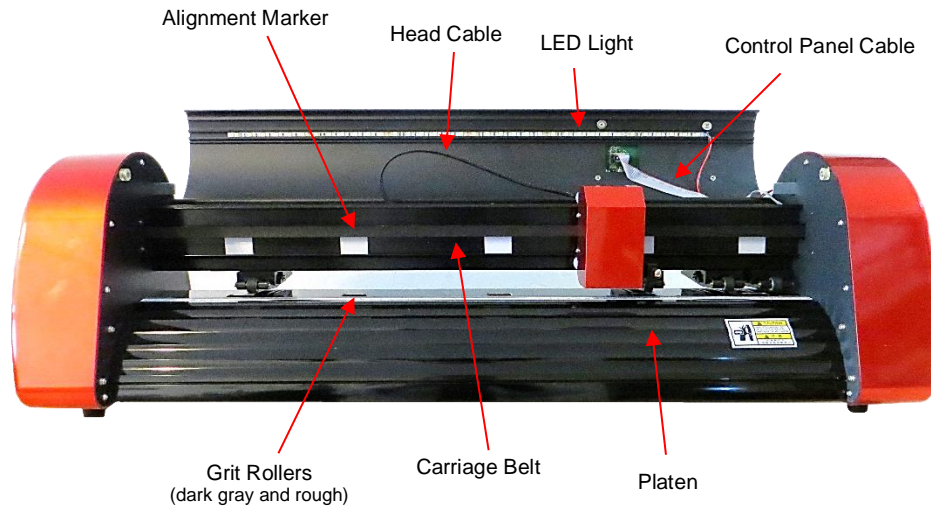
1.6 Parts of the Skycut

Front

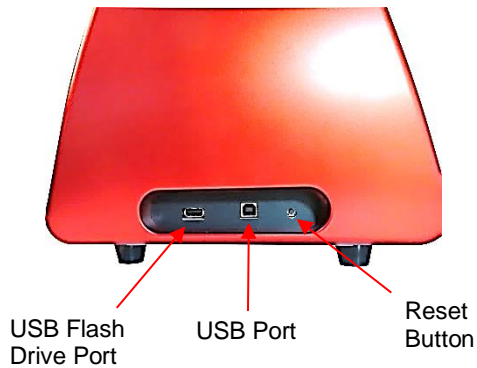


- Alignment Markers: indicate to the user the available positions for the pinch wheels
- Blade Carriage: moves the Blade Holder Seat left and right
- Blade Holder Seat or Jaw: holds the blade holder, test pen, and other accessories
- Control Panel: used to change settings, set up Wi-Fi, cut PLT files, and more
- Cutting Strip: protects a blade when cutting backed materials without using a cutting mat
- Grit Shafts (5 in total on EV24): allow the pinch wheels to grip the mat or material so they can be moved in and out of the cutter during cutting
- Pinch Wheels (4 in total on EV24): grip the mat or material so that the grit shafts beneath will feed the mat or material in and out during cutting
- Ruler: for measuring and aligning rolled materials

Front with Cover Open



Right Side



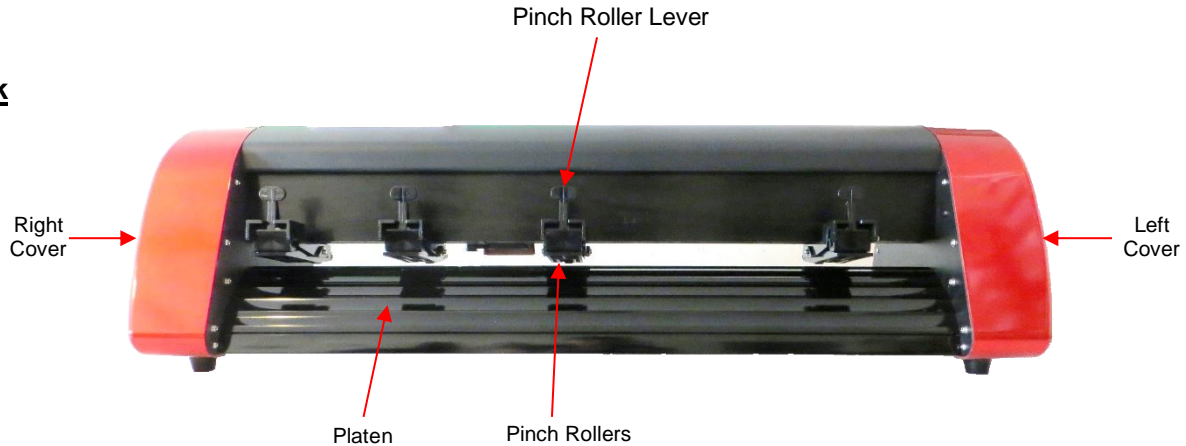
- USB Flash Drive Port: used to load PLT files via control panel for cutting
- USB Port: option to connect computer to Skycut with included USB cable
- Reset Button: used to reset Skycut's cutting buffer (does not reset calibrations)

Left Side



- Power Port: plug power cable into this port
- On/Off Switch: power cutter on or off

Back



- Pinch Wheels (4 on 24" model): grip the mat or material so that the grit shafts beneath will feed the mat or material in and out during cutting
- Pinch Wheel Lever: raises and lowers the pinch wheels

1.7 Accessories

1.7.1 Assembling the Skycut Stand

- If you purchased the optional stand, please refer to this [Video](#) for detailed instructions on assembling the stand and mounting the cutter onto it.

1.7.2 Test Pen

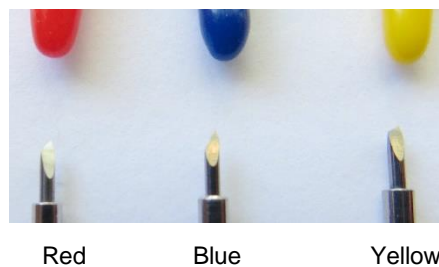
- The test pen is used in calibrating the **Scale** (*Section 3.7*) and is also recommended for test drawing while you are learning where shapes will cut. Note that a small piece of wax needs to be removed from the pen's nib before use. You may also wish to cut off the very top of the pen refill so that it more easily fits into your EV24:



Spring goes over the top of the pen insert and stops at a small ridge on the insert

1.7.3 Skycut Blades

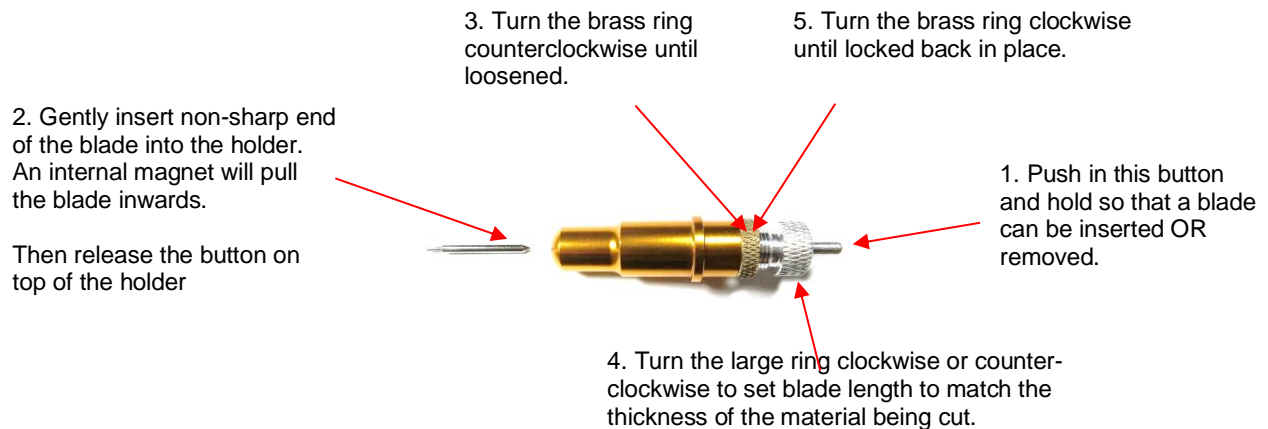
- There are three kinds of blades that fit inside a Skycut blade holder:



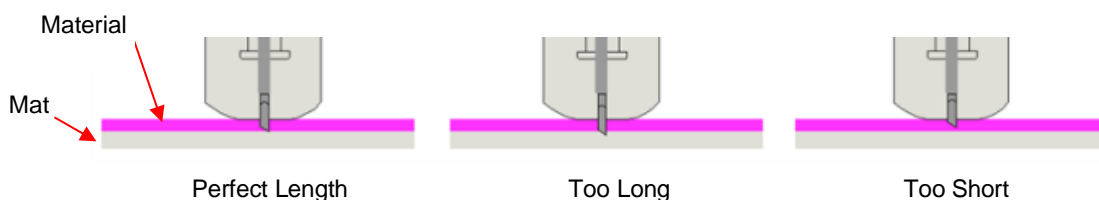
- ◇ The 45° **red** capped blade is suited for cutting thinner materials such as paper, all cardstock types, heat transfer vinyl, and wall/auto/decal vinyl.
 - ◇ The 60° **blue** capped blade is a much longer blade and is well-suited for cutting thicker materials, such as gum paste, craft plastic, craft foam, and rhinestone template material.
 - ◇ Sold separately is the 30° **yellow** capped blade. It is a wide blade and is well suited for cutting thin fabric and window tint film. It has been reported that it also works well with cardstock that has been exposed to humidity.
- Note that the blades all have a cutback on the opposing side of the blade (right side, in the prior photo). This reduces the blade offset value and allows for better detailed cutting of small shapes.

1.7.4 Blade Installation

- The blade must be carefully inserted into the blade holder. Do this over a soft surface (e.g., over a hand towel). It's important to protect the fragile blade. To install, follow the numbered steps as shown:



- The **Blade Length** (also called **Blade Exposure** or **Blade Depth**) is how much blade is exposed at the bottom of the blade holder. For optimal cutting, you want this length to match the thickness of the material or be just a tiny bit longer.
- When setting the **Blade Length** (Step 4 in the prior photo), hold the blade holder up next to the material before pressing the material to the mat, so that you can more accurately set the length to match the thickness of the material. For very thin materials, like vinyl and thin paper, just the very tip of the blade will be protruding from the bottom of the blade holder. In fact, you should just barely be able to feel it with your fingertip and not be able to see it very well, if at all. Having the blade fully extended will never result in better cutting. In fact, it can cause skewing, tearing of the material, damage to the blade, and damage to the mat or cutting strip.
- A good way to test your blade length is to fold a piece of the material onto itself and then cut a line into the material by hand. Press firmly but not too hard, as more force will not determine if the blade is set to the right length. If the blade cannot cut through the material, you will need to extend the blade. If the blade cuts through the material and cuts into the next layer, you need to retract the blade. If the blade cuts through the material but does not cut into the layer below, you have the perfect length.



- When conducting a test cut, be sure to check your mat (or the top of a backing sheet) for cut lines after the test. You should be able to set the length to get clean cuts but with only fine lines or no lines in the mat or backing sheet. If you do see deep cut lines, retract the blade length $\sim\frac{1}{4}$ of a turn counterclockwise. Repeat your test cut.

1.7.5 Cutting Mat

Tips on Using the Cutting Mat

- Always use a mat to hold the material to be cut unless the material has its own protective backing. For example, vinyl and iron-on transfer both come with a layer that you do not cut. Thus, this backing layer serves as the carrier for cutting. Paper and cardstock do not have a backing, thus they must be cut on the mat.
- ***IMPORTANT!*** A new mat may be too sticky if you are cutting certain products. This can cause difficulty in removing cut items without tearing. Place an old but clean bath towel over the surface of the mat and press with a brayer or rolling pin. Then pull up. Test the stickiness by pressing the palm of your hand in the middle of the mat and lifting. If the mat remains stuck to your hand, repeat until the mat can still be lifted but will release. It should only take a few pressings to greatly reduce the stickiness, as tiny (too small to be visible) fibers from the towel are added to the surface.
- Do not leave the pinch wheels in a down position when the Skycut isn't in use. This warps the plastic sooner, shortening the useful life of the cutting mat.

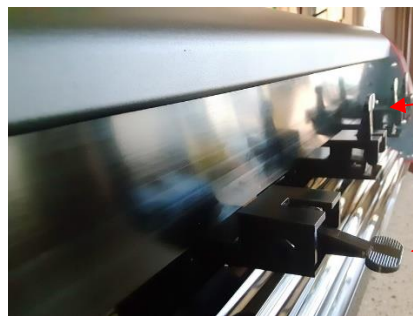
Cleaning and Replenishing the Cutting Mat

- When mats begin to lose their stickiness, they can be washed:
 - ◇ Use a mild dishwashing detergent, warm water, and a soft brush to thoroughly clean the surface. You're not trying to scrub the adhesive but just wet the invisible fibers that have been deposited from your cutting materials and get them released from the glue.
 - Rinse well, shake off excess water, and place sticky side down onto a bath towel.
 - Thoroughly dry the non-sticky side of the mat with another towel.
 - Pull the mat up and the sticky side should now be dry enough for immediate use. Test by making sure the mat will stick to your hand.
- While washing with soap and water should revive the original adhesive, you can add more adhesive if necessary:
 - ◇ Virtually any repositionable adhesive may be used on the cutting mat. Some of the popular choices include: Krylon Easy Tack, Aleene's Tack It Over and Over (view the video at the start of this section), Crafter's Companion Stick and Spray, Zig 2 Way Glue with wide tip, Craft Smart Off 'N On, and Scotch Repositionable Craft Stick. There's another spray adhesive, Scotch Super 77, which does not leave a sticky surface but is excellent for stabilizing paper and cardstock.
 - ◇ If you are cutting thicker materials, such as oil board or styrene, then you may want to experiment with a stronger adhesive and use painter's tape to secure the material to the mat. If you are cutting thin paper, then you may want to experiment with a lighter adhesive.
 - ◇ With most repositionable adhesives, you can control the tackiness based on the amount applied. Thus, always add a little bit at a time. As mentioned above, if you add too much, just apply a layer or two of cotton fibers by pressing with a bath towel.
- Other reported methods for cleaning mats:
 - ◇ Use a plastic scraper (an old credit card will suffice) to scrape off any random material pieces remaining on the mat after a cut.
 - ◇ For finer particles of paper or lint, you can use a lint roller. Tear off a sheet and then press down and pull up across the surface of the mat to clean in sections. Baby wipes can accomplish the same task.

- ◇ To completely remove adhesive from the mat, apply Goo Gone, Duck Adhesive Remover, or Avon's Skin So Soft Bath Oil across the surface. Allow a minute to soak in and then scrape off with a sharp metal spatula. Repeat, as necessary, until the mat is thoroughly clean and no longer sticky. Wash, dry and then add any repositionable adhesive.
- When necessary, the rubber wheels and the grit shafts may be cleaned with isopropyl alcohol or Un-Du. Apply the cleaner to a clean lint-free rag and rub the entire wheel and/or grit shaft until free of adhesive.

1.8 Pinch Wheels

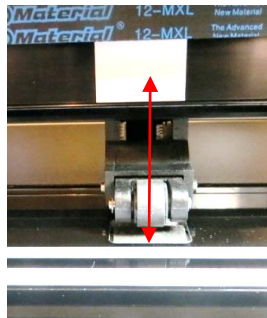
- The levers on each pinch wheel are used to raise the wheels for loading the material and/or mat and lower the pinch wheels for cutting.
- Lift up an individual lever to raise that pinch wheel:



Pinch wheel is in the up position.

Pinch wheel is in the down position.

- Note that for a pinch wheel to grip properly, it must be positioned over a grit shaft. To facilitate alignment, note the white rectangles positioned along the horizontal bar behind the blade carriage. With the levers in the up position, slide the pinch wheels along the bar, as needed:



Wheels should be centered over grit shafts which are directly below the white rectangles

- When using the cutting mat, it is recommended that the material be placed in the middle of the mat and the mat placed roughly in the middle of the cutter. Then use the second and fourth pinch wheel locations for two pinch wheels. This keeps the pinch wheels off the material and provides an equal balance while the mat moves in and out during cutting:

Middle two pinch wheels are placed under 2nd and 4th white rectangles

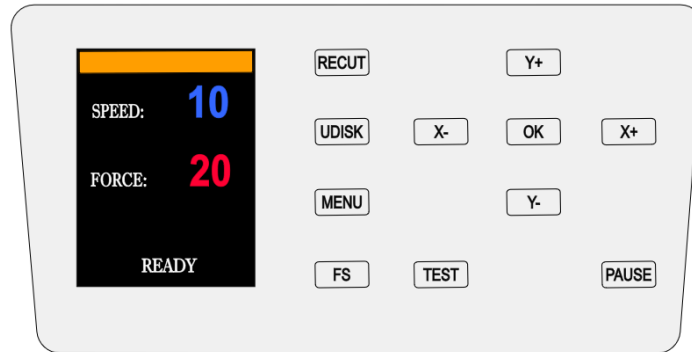


Pinch wheels are approx. the same distance from the outside edges of the cutting mat

- Note that if your material is very wide, then it is fine to have the pinch wheels over the material. However, you may need to be extra careful when removing any cut shapes or waste material in those locations.

1.9 Control Panel

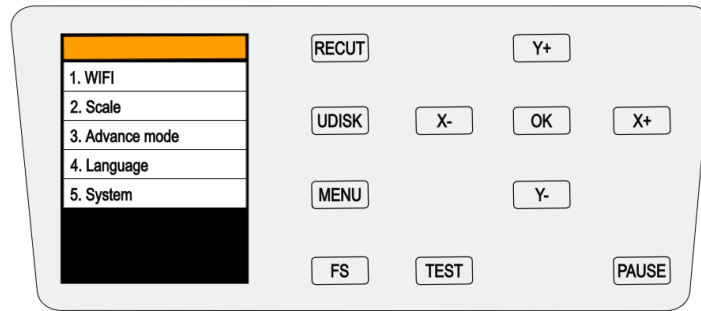
- When you first power on the EV24, the following **SPEED** and **FORCE Screen** or **Home Screen** will be displayed after several seconds:



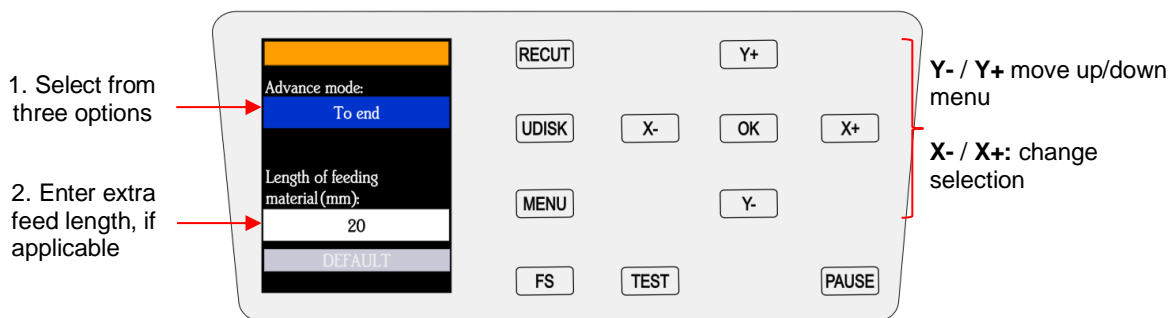
- The functions of the buttons on this control panel are:
 - ◇ **RECUT:** Recuts the last completed job which is stored in the EV24's memory.
 - ◇ **UDISK:** Opens the **UDISK** window allowing access to files on a USB thumb drive plugged into the EV24's USB Flash Drive port. Files must be saved in .PLT format to appear in the menu (See *Sections 2.3.3 and 2.3.4* for details).
 - ◇ **MENU:** Opens a menu of additional functions (See *Section 1.9.1* for details). It can also be pressed in other modes to return to the **SPEED** and **FORCE Screen**.
 - ◇ **FS:** Press this button once and the **SPEED** and **FORCE** settings will light up indicating you are in **FS** set mode. The **X-** and **X+** buttons can now be used to change the **SPEED**. The **Y-** and **Y+** buttons can be used to change the **FORCE**. (See *Sections 3.3.1 and 3.3.2*).
 - ◇ **TEST:** Press the **TEST** button to cut a small square. This is recommended to ensure a clean cut is achieved with the current settings before proceeding with a cut job.
 - ◇ **PAUSE:** Pressing this button will pause the cutting process in case any changes need to be made. Pressing again will resume the cut. **IMPORTANT:** Pressing and holding the button will abort the cut and the control panel will then again display **READY**.
 - ◇ **X** and **Y** and **OK** buttons are used in the following ways:
 - The **X-** and **X+** buttons move the carriage left and right, while the **Y+** and **Y-** buttons move the grit rollers. This allows you to start cutting anywhere on the media (i.e., establish an origin).
 - As mentioned above, these same buttons will change the **SPEED** and **FORCE** settings when the **FS** button has been activated. Pressing **OK** (or repressing **FS**) will then deactivate **FS** mode.
 - In some of the other control panel screens, the **X** and **Y** buttons will be used to select other options and the **OK** button will accept these options or changes in settings.

1.9.1 Menu

- Pressing the **MENU** button provides access to the following five options:



- ◇ **WIFI:** Connect the EV24 to your home or office router for wireless connectivity (refer to *Section 2.3.2*).
- ◇ **Scale:** This setting is used to input the sizing calibration (refer to *Section 3.7*).
- ◇ **Advance mode:** Three options for where the blade holder moves at the end of a cut:



- **To Start:** return the blade holder to the origin (the location immediately before the cut was started)
 - **To End:** advance the blade holder to the top of the completed cut with the option to move an additional distance (or retract)
 - **To Left:** advance the blade holder to the left of the completed cut with the option to move an additional distance (or retract)
- ◇ **Language:** This screen offers a choice of three languages: Mandarin, English, and Spanish. You can choose one of these for the language in which all settings and menu communication are displayed.
 - ◇ **System:** This screen displays hardware and firmware versions, Baud rate, and other settings that should need no adjustment unless directed by a Skycut technical representative.

1.10 Maintenance

Skycut machines do not require any kind of lubrication or routine checks. However, here are a few things to keep in mind for successful operation of your cutter:

- **Keep the pinch wheels clean.** Depending on the adhesive being used on the cutting mat, it's possible for the pinch wheels to become sticky and pick up small pieces of cardstock or other material being cut. This can lead, in some cases, to the mat skewing or ruining materials during subsequent cuts. To clean the pinch wheels, use a lint-free cloth and an adhesive remover such as isopropyl alcohol or Un-Du to clean the pinch wheels thoroughly.
- **Keep the grit shafts clean.** Equally important as the pinch wheels, the grit shafts beneath the cutting mat should also be free of adhesive and tiny bits of material. They can be cleaned the same way as the pinch wheels. Note: Do not pour cleaner onto a grit shaft. Instead, dab some adhesive remover onto a lint-free cloth and then use the damp cloth to clean the shafts. You can also use tweezers to remove any material or adhesive that is stuck to a shaft.

- Keep the cutting mat clean and sticky. As mentioned in the *Section 1.7.5*, the cutting mat can be washed with soap and water to remove small invisible pieces of material which are reducing the tackiness of the cutting mat. After drying, you can add more repositionable adhesive, if needed.
- Check your blade holder, as needed. If suddenly you cannot get a clean cut, check the blade holder for any tiny slivers of material that may have been caught up by the blade and fed up inside the blade holder.
- If you cut vinyl or other backed materials regularly, you may need to replace the cutting strip at some point. You will be able to tell based on seeing deep cuts in the strip and an inconsistency in the cutting. Contact your dealer for information on obtaining a replacement.

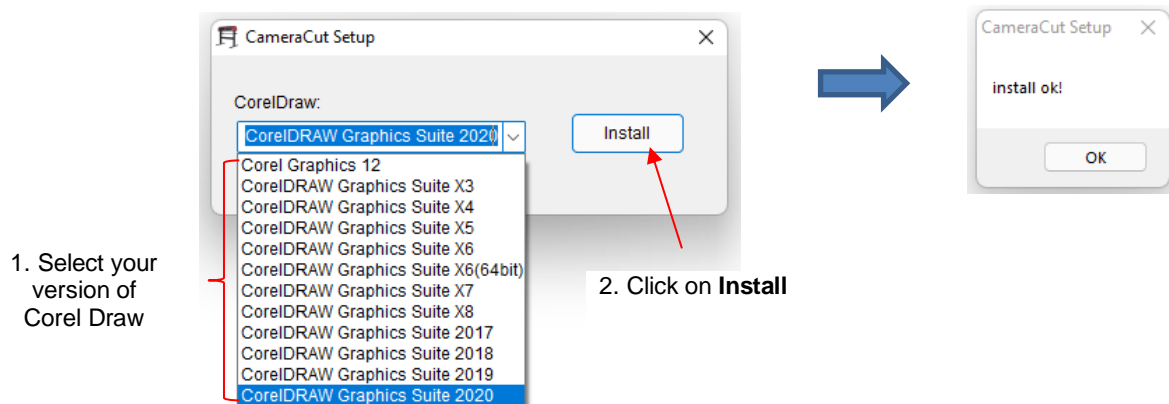
2. Corel Draw Plugin

2.0 Quick References

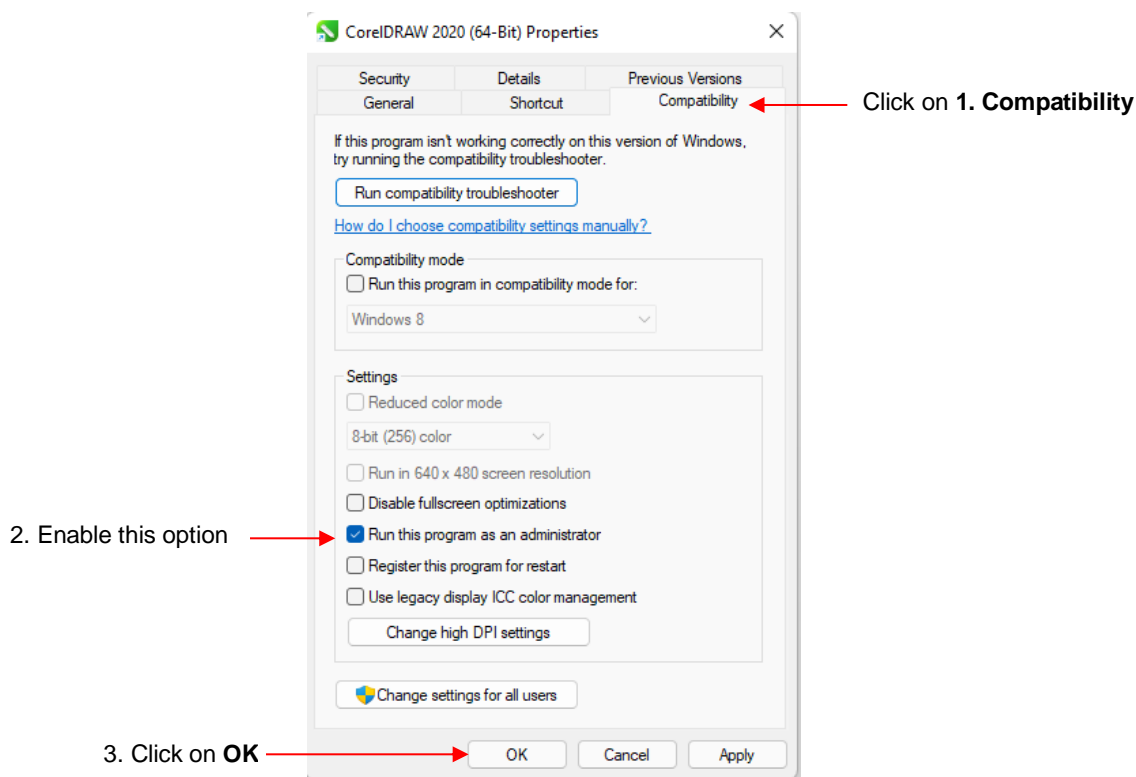
- How to download and install the Corel Draw plugin: *Section 2.1*
- How to set up communication between a computer and Skycut: *Section 2.3*
- Testing communication and learning the orientation of cuts via the test pen: *Section 2.4*
- How to use the USB Flash Drive feature: *Sections 2.3.3 and 2.3.4*

2.1 Installing the Software

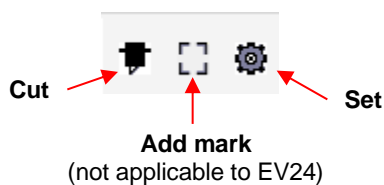
- Go to the following link to download the Corel Draw Plugin:
2019 or older: https://sky-cut.com/page89?product_id=65
2020: <https://drive.google.com/file/d/1ldDgduWd6WU3V-04Jz2cfEhn9lrXfSG5/view?usp=sharing>
- After saving to your computer, extract the zip and right click on the exe file and select **Run as administrator**.
- **IMPORTANT:** For those with Corel Draw 2021 or 2022, please use the following links for instructions:
[Installing CD Plugin for Corel Draw 2021](#)
[Installing CD Plugin for Corel Draw 2022](#)
- In the window which opens, select the version of Corel Draw you currently own and click on **Install**. After a short time, you should receive an **install ok!** message:



- After installing and **before** opening Corel Draw, you need to change a setting. Right click on your Corel Draw launch icon and select **Properties**. Click on the **Compatibility** tab and mark the option called **Run this program as administrator**:



- Open Corel Draw and you will see the following new icons available above the document area:



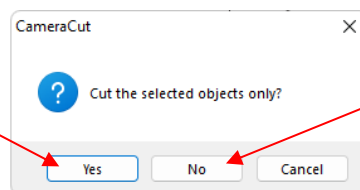
◇ The **Cut** and **Set** functions are covered in the next section.

2.2 Cut and Set Functions

2.2.1 Cut Icon

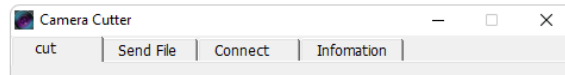
- When you first click the **Cut** icon , the following window opens. Note how you would answer the question:

Click **Yes** if you have several shapes in the document and you only want to cut certain ones you have pre-selected



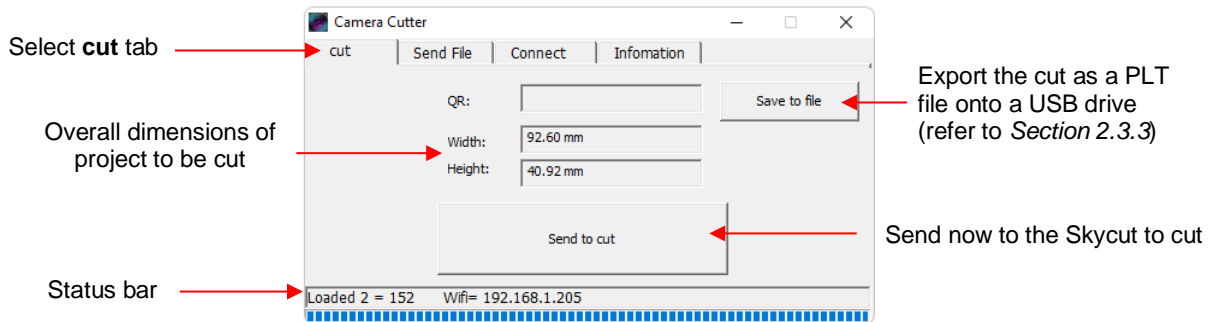
Click **No** if you want all the shapes in the document to cut

- Upon answering the question, the **Camera Cutter** window opens:

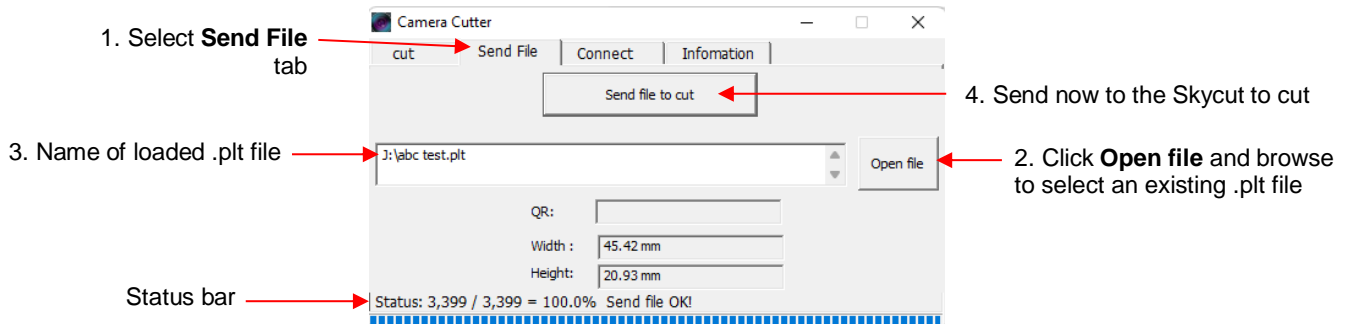


- There are 4 tabs with the following main purposes:
 - ◇ **Cut:** Send a project in Corel Draw to cut
 - ◇ **Send File:** Open a previously saved .PLT file and cut from Corel Draw to the Skycut
 - ◇ **Connect:** Choose a connection method (refer to *Section 2.3*)
 - ◇ **Information:** Test connection and obtain information from Skycut firmware


- **Cut tab:**

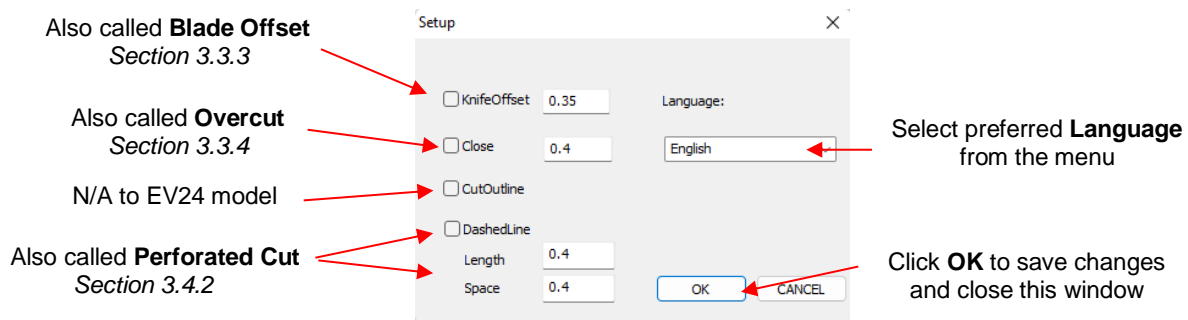


- **Send File tab:**



2.2.2 Set Icon

- When you click the **Set** icon , the following window opens. Note the Section numbers where additional information will be presented on each setting.



2.3 Connecting the Skycut to Your Computer

- Place your Skycut on a sturdy horizontal surface. If using the cutting mat, be sure to allow enough free room in both the front and the back for the mat to extend during cutting.
- Powering On:
 - ◇ Plug the power cord into a wall outlet or power strip. Connect the power cord to the Skycut on the left side end cap.
 - ◇ Turn on the power using the power button that is also on the left side end cap. After several seconds, the light inside the Skycut will turn on and the blade carriage will do a slight jog.
- You have four options for sending files and information from your computer to the Skycut:
 - ◇ **Direct USB** using the included USB cable
 - ◇ **Wi-Fi** – adding the Skycut to a home/office network that is also accessed by your computer
 - ◇ **Wireless Standalone** – connecting wirelessly to your computer
 - ◇ **UDISK** - Exporting PLT files from Corel Draw onto a USB flash drive and then loading those files using the control panel on the Skycut.
- Review the information in the following table to understand the differences between these options. Note that implementing any of these options does not preclude you from changing to another one, as needed.

Connection Options for the Skycut


<u>Option</u>	<u>USB</u>	<u>Wireless to Network (Wi-Fi)</u>	<u>Wireless Stand-Alone</u>	<u>UDISK (USB Flash Drive)</u>
<u>Description</u>	The Skycut is connected to the computer via a USB cable	The Skycut is wirelessly connected to a network router	The Skycut is wirelessly connected to the computer.	Files are saved in PLT format from design software to a USB flash drive
<u>Requirements</u>	USB cable (included)	Wireless network router and knowledge of router's name and password	Computer must have wireless capability	USB flash drive
<u>Pros</u>	Easy to install; Reliable and fast form of communication.	Skycut can be located anywhere within range of the router; Other computers can cut to the Skycut	Skycut can be located anywhere within range of the computer; Other computers can cut to the Skycut	Skycut can be located anywhere
<u>Cons</u>	Skycut is physically connected to the computer; Cannot be accessed by other computers at the same time	Requires more steps to set up; Some routers may require setting changes in order to work with the Skycut	Computer is now connected to the Skycut, thus no <u>wireless</u> access to the Internet or to other wireless devices	More steps due to saving and then loading the file; Cannot adjust size and certain cut settings once saved

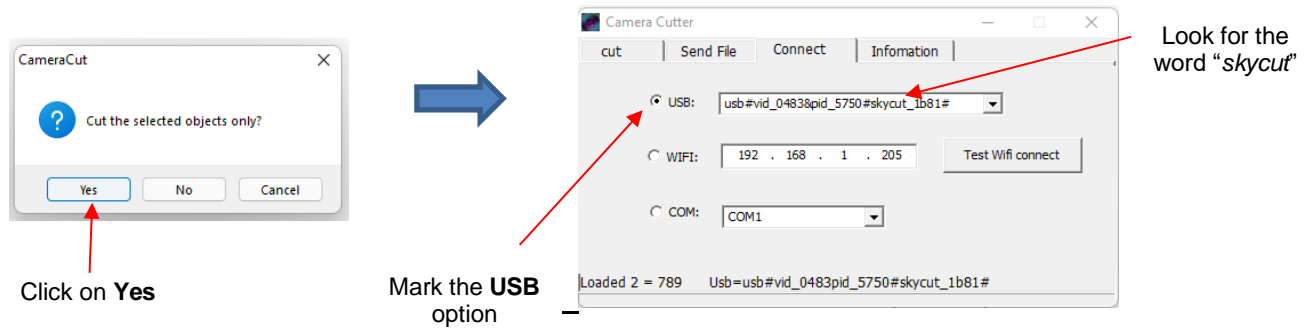
- The following sections present what steps are required for three of the connections. For **Wireless Stand-alone**, which is not commonly used, refer to *Appendix B*. If you run into connectivity issues with any of these options, please contact your dealer.

2.3.1 USB Connection

Video

- Plug the small square end of the USB cable into the right end cap of the EV24. Plug the USB end into an available USB port on your computer.
- Open Corel Draw and start a new document. Add any vector shape(s) you wish to the document area and select them.

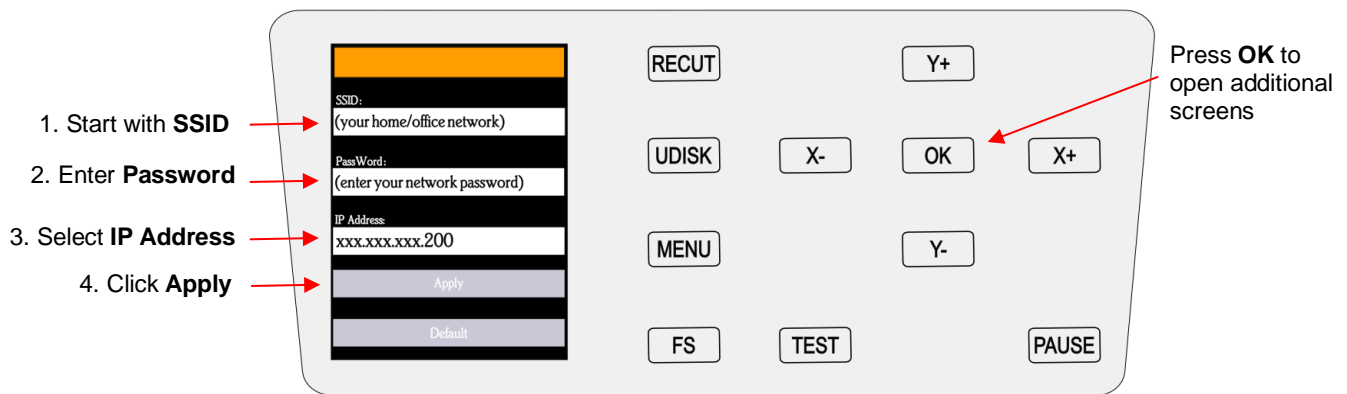
- Click on the **Cut** icon  above the document area, answer **Yes**, and then select the **Connect** tab:



- Mark the **USB** option. The connection should contain the word “*skycut*” within it. If not, open the drop-down menu to find the correct one. If you cannot locate the connection, verify the connection at both the cutter and on the computer.

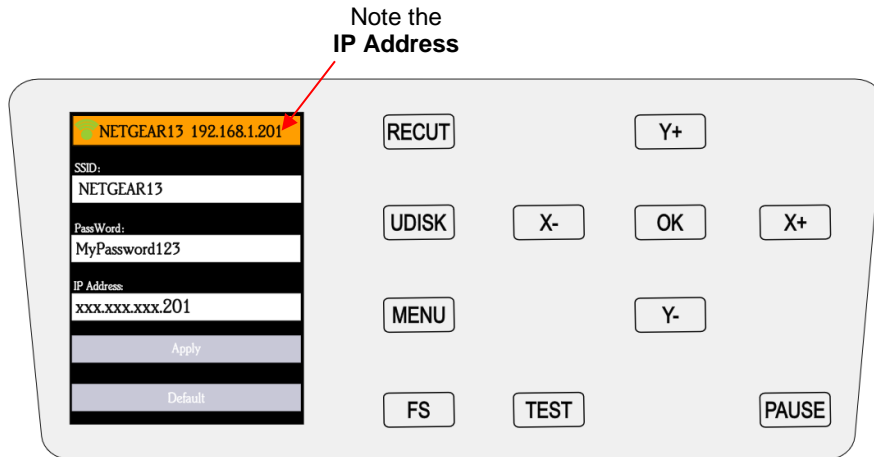
2.3.2 Connecting the EV24 to a Wi-Fi Network

- For initial setup using the Wi-Fi option, you may need to place the cutter in the same room or in close proximity to the Wi-Fi router. This will create a stronger connection and faster Wi-Fi network configuration. Once the connection is set, you can move the cutter around within the limits of your router’s coverage area.
- You will need the name of the network and the password.
- On the control panel, press the **MENU** button, select **WIFI**, and press **OK**. The following screen appears, although initially yours will have more blank fields:

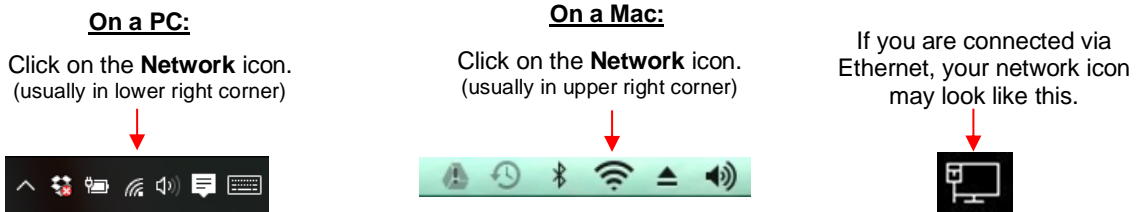



- Work in order downwards, starting with **SSID**:
 - Use the **Y** buttons to highlight **SSID** in blue. Then press **OK** and the EV24 will begin scanning for available networks. This may take a minute before a menu of networks appears. Select the network you wish to use (should match what your computer is using) and press **OK**.
 - Use the **Y-** button to move down to **PassWord** and press **OK**. A screen resembling a keyboard will appear. Use the **X** and **Y** buttons to move to appropriate keys in order to enter your network’s password, pressing the **OK** button to add a character to the display of your password. Note that the **AB** key will toggle to upper case keys, if needed. The button in the lower right will delete the last character showing. When your correct password appears in the display, move to the **OK** key, and press it.
 - Use the **Y-** button to move down to **IP Address**. The first three sets of values will be obtained from your network but will continue to be displayed with the letter “x.” Use the **X+** or **X-** buttons to set the last digits of the **IP Address** you wish to use. Press **OK**.

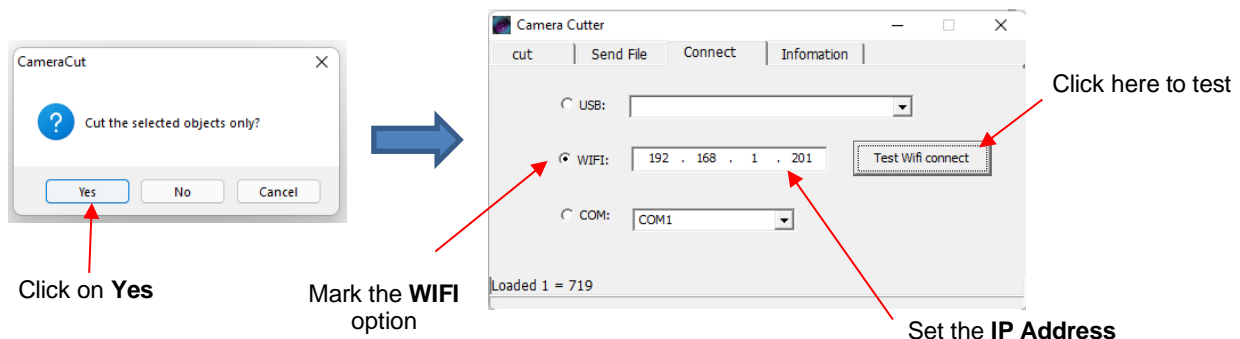
- (4) Use the **Y-** button to move down to **Apply** and press **OK**. Wait a minute or two and the **IP Address** will then appear in the orange strip at the top of the display. Your **EV24** is now a connected device on your network.



- (5) Note the complete **IP address** at the top of the window. You will be entering this same **IP address** in the software you use for cutting.
- (6) If you need to reset or change networks, move to the **DEFAULT** option and press **OK**. After a minute, this will reset the settings and enable you to change the network.
- (7) Before connecting the EV24 to your computer using a Wi-Fi connection, you must verify that your computer is also connected to the same network. To do this, locate and launch the network icon for your computer:




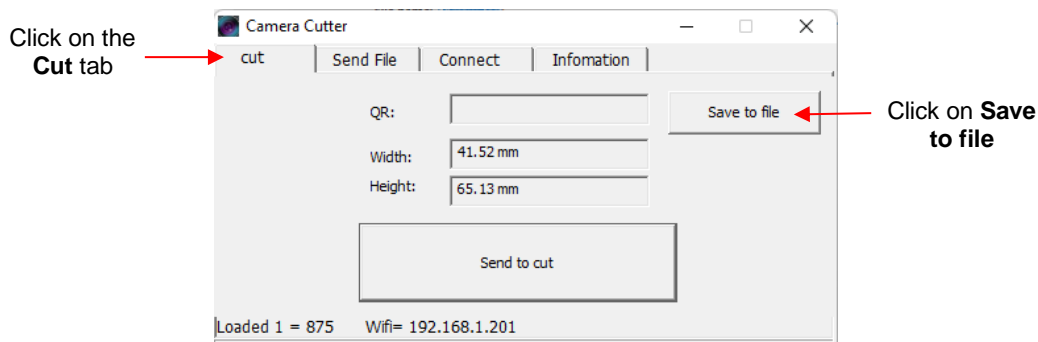
- (8) A menu of available networks will appear. Select the network used for the EV24 setup and, if needed, enter the network password. Wait a bit for the connection to be made and the menu should indicate you are now connected to that network.
- (9) Open Corel Draw and start a new document. Add any vector shape(s) you wish to the document area and select them.
- (10) Click on the **Cut** icon  above the document area, answer **Yes**, and then select the **Connect** tab:



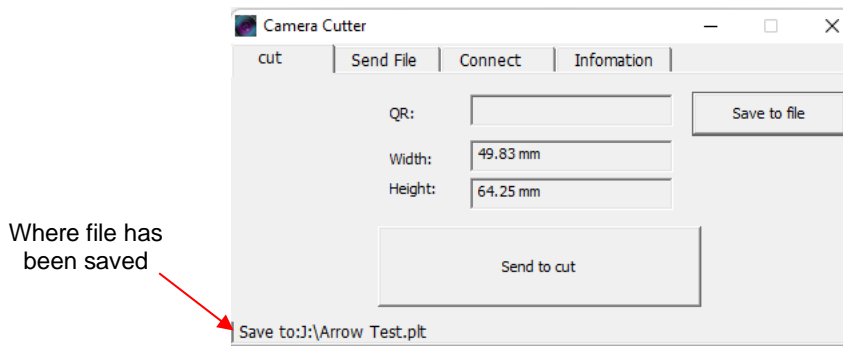
- ◇ Mark the **WIFI** option and enter the same **IP Address** as the one you set up on the Skycut control panel. Click on **Test Wifi connect**.
 - If you receive a **connect err** message, try again. If it continues to fail to connect, confirm the **IP Address** you entered. Additional troubleshooting for Wi-Fi connections can be found in *Appendix A1*.
 - If you receive a **connect ok** message, the connection has been established.

2.3.3 USB Flash Drive

- Open Corel Draw and start a new document. Add any vector shape(s) you wish to the document area and select them.
- Insert a USB flash drive into your computer's USB port.
- Click on the **Cut** icon  above the document area, answer **Yes**, and then select the **cut** tab. Click on **Save to file**:



- A save window will open where you can browse to find your flash drive and enter a name for saving the file as a PLT.
- The cut window will update indicating the drive letter and file name for the saved file:



- If you are new to your Skycut, it is recommended that you go to *Section 2.4* now to learn how to insert the mat and test pen, adjust settings on the control panel, and set up a test design. Then, when you are ready to cut, return to this section.

2.3.4 Loading and Cutting a .PLT File from the USB Drive

- Insert the flash drive into the right endcap of the Skycut.

- On the control panel, press the **FS** button and change the **FORCE** and **SPEED** settings. Perform a test cut, if needed.
- ***IMPORTANT:*** Once the PLT file has been selected, cutting will begin immediately! Thus, make sure the media is inserted and aligned in the cutter, the pinch wheels are down, and the blade is positioned at the desired location for the origin.
- Press the **UDISK** button on the control panel. The EV24 will browse the contents of the installed USB thumb drive and display all readable .PLT files. Note that if there are folders on the drive, highlight the folder and press the **OK** button to display that folder's contents. Use the **X-** button to exit from a folder.
- Once you have the desired PLT file highlighted, press **OK** to begin the cut.
- If you wish to cut a PLT-saved file directly from Corel Draw to the Skycut, open the file from the **Send File** tab. Refer to *Section 2.2.1 (Send File tab)*.

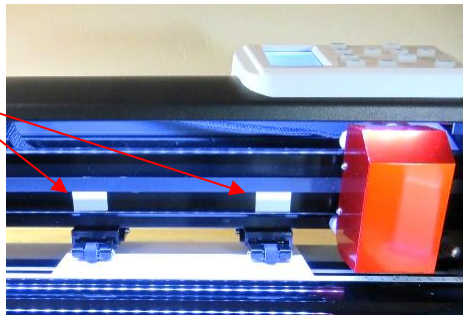
2.4 Test Draw Shapes

- New owners tend to be VERY eager to try out their Skycut. It's important to test your cutter to ensure that data is being sent properly from your computer to the cutter. The following sections will allow you to do some testing with the pen tool. But note that **the following steps are for DRAWING, not cutting**. Before inserting the blade holder into your cutter, please read the following *Sections 1.7.3, 1.7.4, 3.1, 3.3, and 3.4*.

2.4.1 Loading the Mat and/or Material

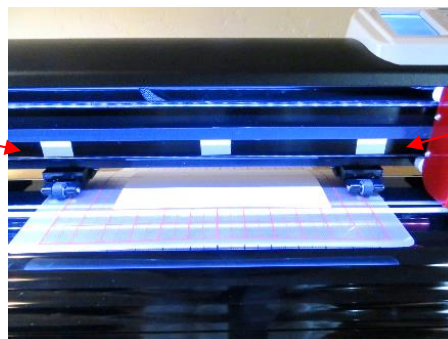
- Besides testing the communication, it is also very important to understand where shapes will cut. This section presents a tutorial on use the test pen and a sheet of paper to draw a shape in order to understand how a design appears in Corel Draw and how it then cuts on the Skycut.
- You have two options when using the test pen:
 - ◇ Insert a sheet of paper directly into the cutter. Make sure the paper is past the ruler so that it doesn't catch when feeding the paper forward:

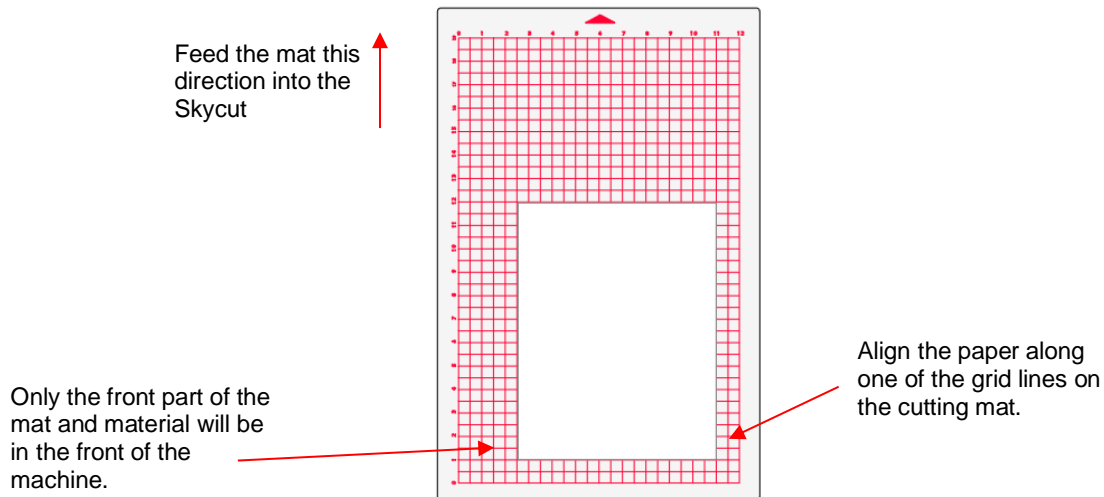
Observe how pinch wheels are centered with white rectangles



- ◇ Or...Place the paper onto the cutting mat and then insert the cutting mat into the cutter:

Observe how pinch wheels are centered with white rectangles

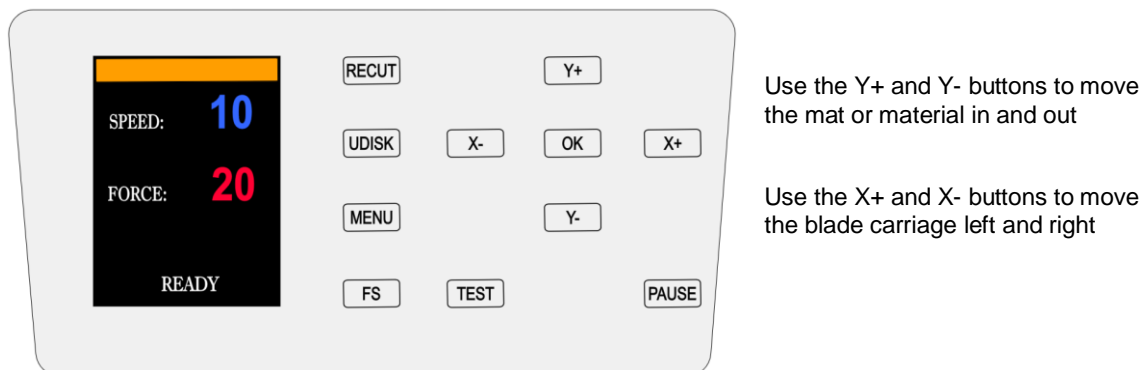




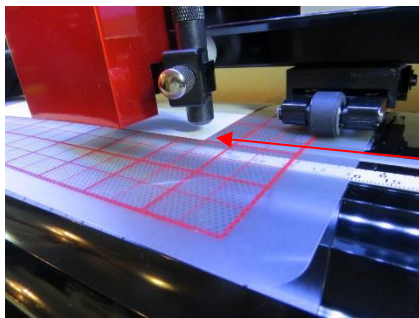
- Use any of the horizontal markings at the front of the Skycut (such as the ruler) to align the mat so that it's straight. Lower the pinch wheels in the back. Most of the mat and the paper should now be behind the cutter, not in the front.
- Before installing the test pen, make sure the pen will write by scribbling on scrap paper. Note that you will probably need to remove a tiny bit of wax on the end of the pen nib. Then follow these steps:
 - ◇ Loosen the screw on the blade holder seat.
 - ◇ Insert the test pen allowing it to freely rest on top of the paper.
 - ◇ Before tightening the front screw, raise the test pen up a little bit (~ 1/8" or several mm). You don't want the pen still touching the paper but you also don't want the pen too high above the paper either.
 - ◇ Tighten the front screw to lock in the test pen. Be careful not to push down on the blade holder seat while tightening.

IMPORTANT! This is NOT the recommended method for loading the blade holder into the cutter. This is presented as a quick way to insert the test pen so that it is in a good position for drawing. The instructions for inserting the blade holder are covered in *Section 3.1.3*.

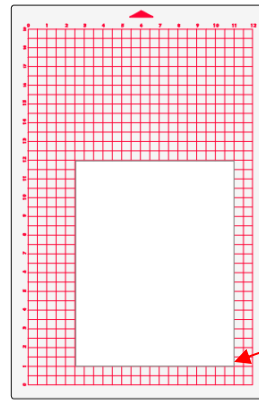
- The arrow keys on the Skycut's control panel will always be used to set the origin for cutting:



- ◇ Click on the buttons or the arrow keys on your keyboard to move the head left or right and the mat in and out. The goal is to have the tip of the pen close to the lower right corner of the paper:



Move pen tip to this corner of the paper



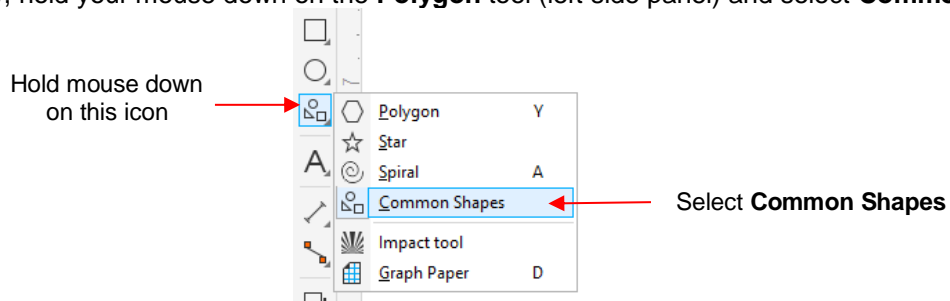
Feed the mat or material this direction into the Skycut

Move the pen tip to this corner of the paper

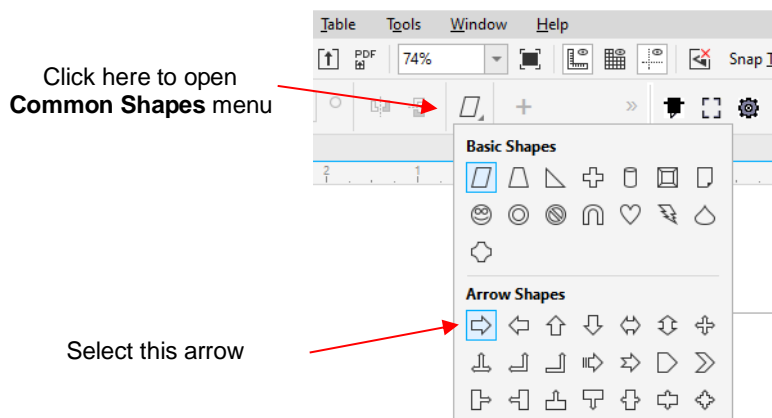
- ◇ Once the pen tip is near the lower right corner, you are ready to set the **Force** and **Speed** (refer to *Section 1.9*). Set the **Force** to 40 and the **Speed** to 10. If you like, press the **Test** button and a test square will be drawn.

2.4.2 Test Drawing a Shape

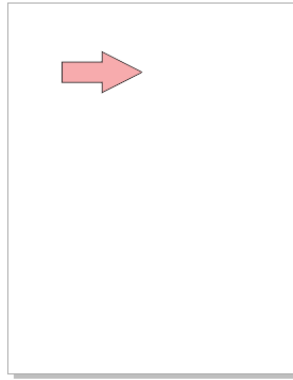
- In Corel Draw, hold your mouse down on the **Polygon** tool (left side panel) and select **Common Shapes**:




- At the top, open the shape menu and select the arrow which points to the right:

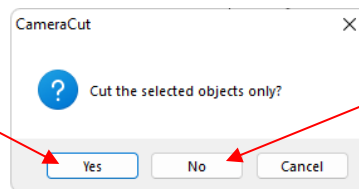


- Drag your mouse to create an arrow which faces towards the right:



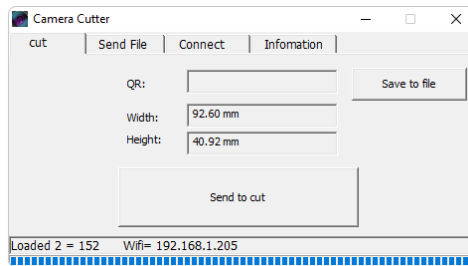
- Click the **Cut** icon  and the following window opens:

Click **Yes** if you have several shapes in the document and you only want to cut certain ones you have pre-selected

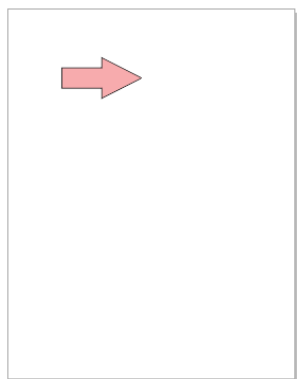


Click **No** if you want all shapes in the document to cut

- ◇ In this tutorial, because you only have the arrow and it's not selected, answer **No** and the **Camera Cutter** window opens:



- Assuming you've selected your preferred connection option (refer to *Section 2.3*), click on **Send to cut**. Note that your shape will be drawn so that it's aligned with the origin you set and will be upside down with respect to how you view it in Corel:



Location in Corel Draw



Where the shape draws on paper

X indicates where pen tip was positioned

- More information on controlling where shapes will cut is covered in *Section 3.2*.

IMPORTANT: Please read *Section 3.1* before cutting!

3. Cutting

3.0 Quick Reference for this Chapter

- How to *properly* mount the blade holder: *Section 3.1.3*
- Understanding **Knife Offset** and **Close**: *Section 3.3.3* and *Section 3.3.4*
- Checklist before cutting: *Section 3.6*
- How to get shapes to cut to precise dimensions: *Section 3.7*
- How to know which settings to adjust to solve cutting issues: *Section 3.8*

The Most Common New Owner Mistakes:

- Too much blade is exposed on the blade holder (material is lifting up and/or tearing) - refer back to *Section 1.7.4*
- The blade holder or test pen haven't been properly mounted - refer to *Section 3.1.3*
- The pinch wheels are not properly positioned (material or mat is sliding around or bunching up during the cut) – refer back to *Section 1.8*
- Failing to do a test cut (recommended cut settings are not working) – refer to *Section 3.1.5* and *3.8*
- Not practicing enough with the test pen and paper (shapes are not cutting in the correct locations) – refer to *Section 2.4*

3.1 What You Need to Understand About Cutting

3.1.1 You Have To Make Mistakes

- To be a successful owner of a Skycut, you need to keep in mind a few factors:
 - ◇ The key to becoming successful at cutting is to do a lot of it.
 - ◇ You're going to make mistakes. This is normal and part of the process of mastering a cutter.
 - ◇ Read all of *Sections 3.1 – 3.3*.
 - ◇ Perform test cuts before cutting large projects. It prevents wasted material and preserves your valuable time.

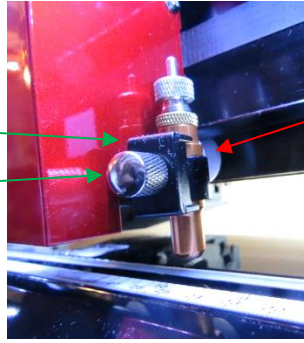
3.1.2 Record Your Successes

- As you have successful cuts, take note of the settings you just used, such as **Force**, **Speed**, blade type, number of passes, brand of material, etc. There is a blank form in *Section 3.9* that you can print and use to record your results. There are also suggested settings for common materials at the end of this chapter. Use these as starting guides but remember that your results may vary based on the many factors which can affect cutting.

3.1.3 Installing the Blade Holder, Test Pen, or Accessory Tools

- The gold blade holder has a rim around the outside that will, when cutting most materials, rest on the lower part of the blade holder seat. When inserting the blade holder, loosen the front screw and the clamp should then move back a bit to permit the blade holder to drop down:

With the front screw loose, the black clamp can be moved back just a bit to allow the blade holder to drop down.



The outer rim on the blade holder is resting on the lower part of the blade holder seat

- The **Blade Height** is the distance from the tip of the blade to the top of the material you are about to cut. Thus, in the photo above, you can see that there are several millimeters of **Blade Height** which is important for two reasons:
 - ◇ You do not want the blade dragging across the material when the blade holder is moving from the origin to the first shape to cut (or between shapes).
 - ◇ More force is applied when there is a drop distance for the blade holder to start cutting. This is also referred to as “punch room” and provides more consistent cutting across the width of the machine.

- When using the test pen or an accessory tool without a rim, you’ll need to insert the tool using a spacer on top of the material. A stack of 35 Post-It notes or 35 sheets of regular copy paper work well.

◇ The recommended method for loading the test pen or another accessory:

- Place the spacer on top of the material, with the material loaded into the Skycut.
- Loosen the screw on the blade holder seat and insert the tool so that the tip of the tool is touching the top of the spacer:

Pen tip just touches top of spacer

Spacer is on top of material which is on top of mat



- Now tighten the front screw carefully making sure you are NOT pushing down on the blade holder seat. Once tight, remove the spacer. You should feel the tool gently scratching the top of the spacer.
- This distance will provide the tool some “punch room” to give extra force and more consistent results.

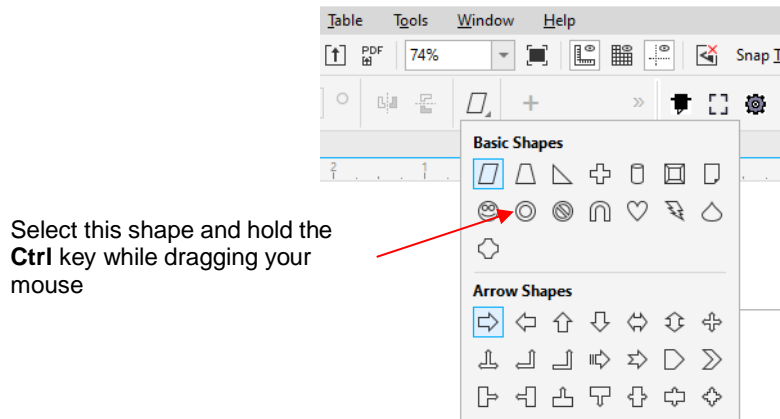
3.1.4 Adjust the Speed, Force, and Number of Passes Based on the Material and Shapes

- Using correct cut settings is equally important as the type of blade, blade length, and blade height. Refer to *Section 3.3* for details about each setting.

3.1.5 Perform Test Cuts!

- You have two options:

- (1) Perform the built-in test cut on the Skycut itself using the **TEST** button on the control panel.
- (2) Select any basic shape and size it to be around 0.3" – 0.5" (~ 8 mm – 13 mm):
 - I personally like using a design with an internal shape, such as a ring. You can then easily see if the blade is cutting into the mat (or into the backing sheet on rolled materials) when you lift out the cut shape and observe where the internal shape cut. To locate a ring, refer to *Section 2.4.2*. There is a ring shape in the **Common Shapes** menu:



- There is a flow chart in *Section 3.8* which will help you determine which settings to change when test cutting a material.

3.1.6 Keep the Cutting Mat Clean and Sticky


- When using the cutting mat, press your materials evenly to the mat. Consider using a brayer both before AND after cutting. Repressing the material after cutting can greatly aid in weeding the cut shapes from the waste.
- When necessary, tape thicker materials to the mat to keep them from slipping during the cut.
- If you cut a range of materials, you might need more than one mat so that you can use stickier mats for certain materials.
- Refer back to *Section 1.7.5* for information on cleaning the cutting mat and adding more adhesive.
- ,

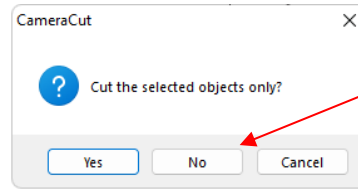
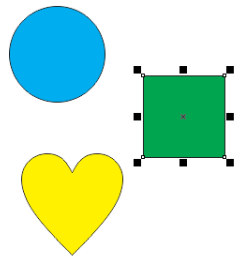
3.1.7 Don't Get Frustrated, Get Help!

- Besides having your own Skycut dealer as your first line of contact, there are other resources where you can ask questions and get answers. Utilize the resources listed in *Section 1.1*.


3.2 Choices Before Cutting

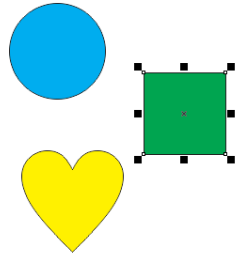
3.2.1 Controlling Which Shapes Will Cut

- There are several ways to control which shapes will be sent to cut:
 - ◇ If you wish to send everything, answer **No** after you click on the **Cut** icon :

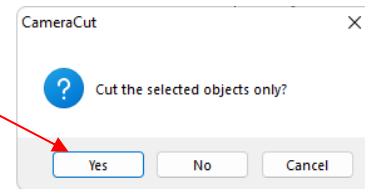


Click **No** and all three shapes will be sent to cut

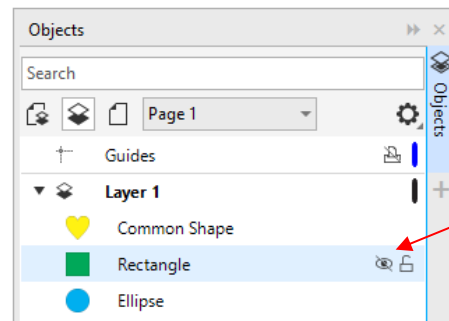
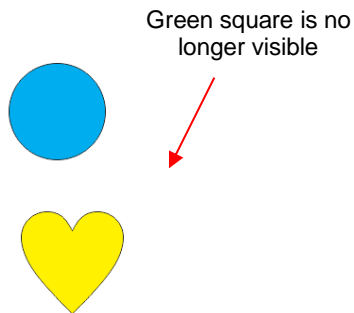
- ◇ Pre-select which shapes you wish to cut and answer **Yes** after you click on the **Cut** icon :



Click **Yes** and only the green square will be sent to cut



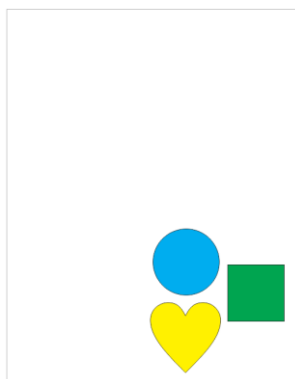
- ◇ **Hide** individual shapes in the **Object** window to prevent them from being sent to cut:



Click the eye icon next to the green square to hide it

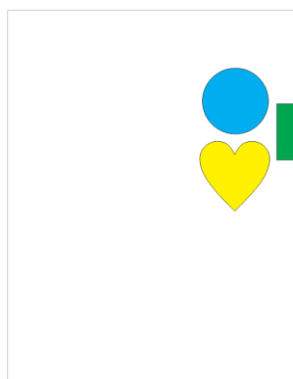
3.2.2 Controlling Where Shapes Will Cut

- In *Section 2.4* it was first shown that regardless of where a project is located in Corel Draw, its bounding box will be moved to align with the origin you set with the blade tip. Thus, you do not need to feel restricted by the document boundaries on the screen:



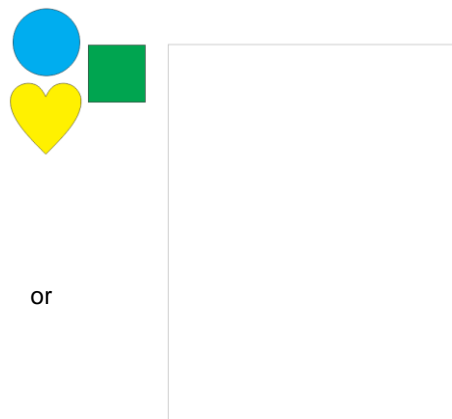
Project can be completely inside the document area

or



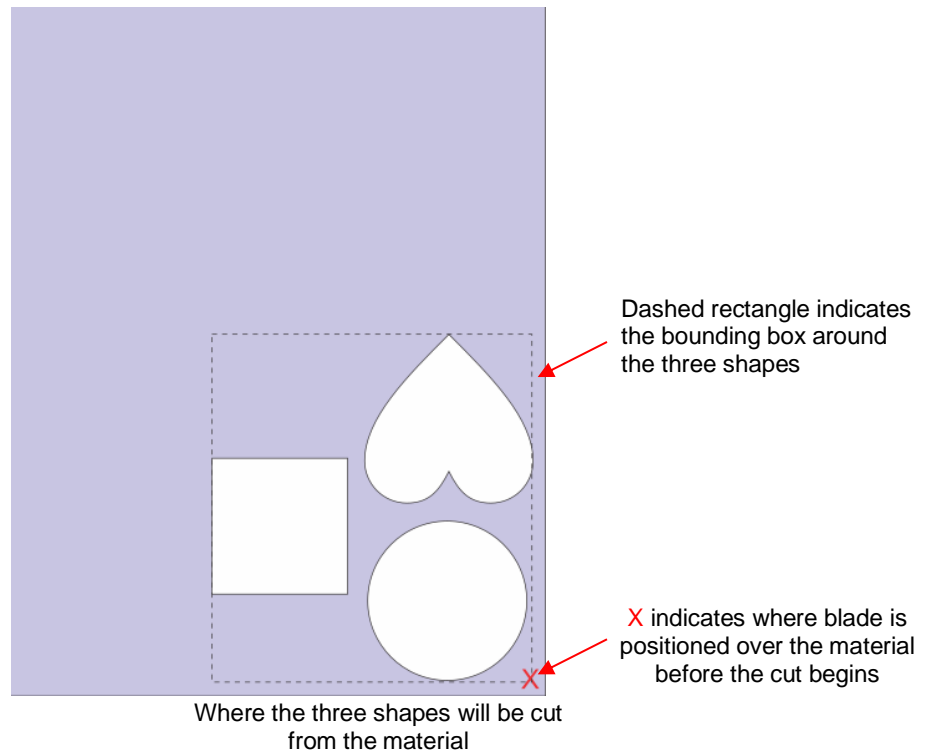
Project can overlap the borders of the document area

or



Project can be completely outside the document area

- In all three situations, the project will cut upside down, with respect to the cutter, and aligned with where the blade tip is located over the material before cutting (also referred to as the **Origin**):

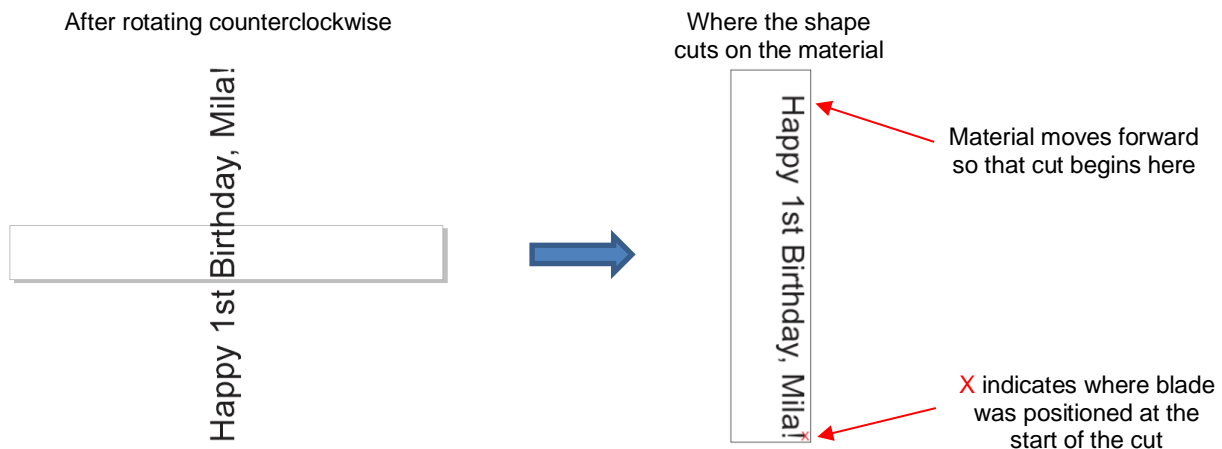


- It's also important to understand how long projects, such as signs, will be cut from the material relative to the setup in Corel Draw. For example, let's assume this is the sign to be cut:

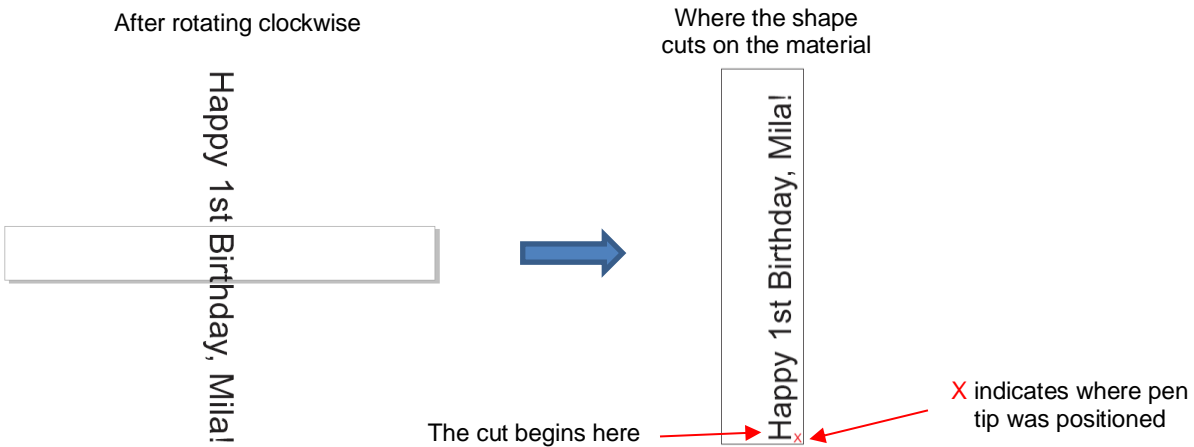
Happy 1st Birthday, Mila!

- Before cutting, the design needs to be rotated by 90° since it is too wide to cut right-to-left. You have two options for rotating: 1. Rotate counterclockwise and 2. Rotate clockwise. Use the following figures to understand what happens in the two situations:

- Rotate by entering 90° (counterclockwise):



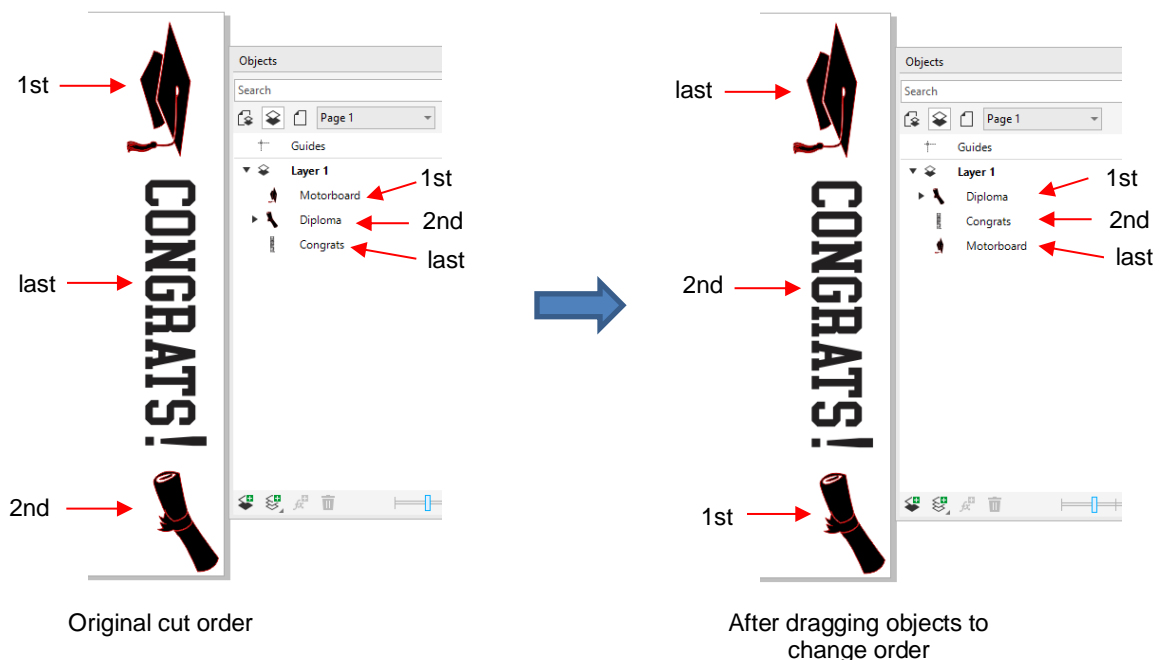
2. Rotate by entering -90° (clockwise):  (Corel Draw will automatically change -90° to 270°)



◇ It's a personal choice which of the two options you choose to use.

3.2.3 Controlling the Cut Order

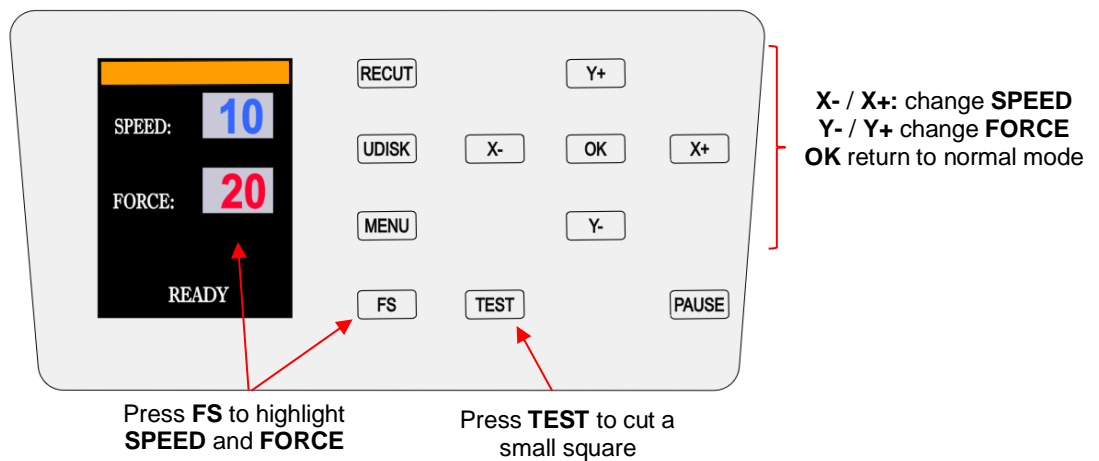
- In certain situations, being able to change the order in which shapes are cut is important. It can reduce unnecessary movement saving time and improving accuracy.
- The order in which shapes cut is based on their order in the **Objects** window, from top to bottom. Thus, in the following example, the diploma will cut first, followed by the mortarboard, followed by the word *Congrats!* However, this also results in excessive movement in the Y direction, so the shapes will be reordered:



3.3 Cut Settings

3.3.1 Force

- **Force** (also called **Pressure**) ranges from 30 to 160 where the maximum of 160 represents ~2000g of cutting force. If it is set too low, the material cannot be cut. In fact, it is recommended that the minimum setting is always 20 or higher. However, if it is set too high, you will get bad cutting (even incomplete cutting at times) and tearing of the material. Always perform small test cuts before cutting your actual project and make adjustments in order to get a clean test cut before proceeding with your larger cut.
- Dull blades will need more force than new blades, thus anticipate increasing the force over the life of the blade.
- When cutting materials that can use either blade, the 45° blade (red cap) will need a little more force than the 60° blade (blue cap), because of the extra contact with the material being cut.
- To change the setting, press the **FS** button and then set the **FORCE** to the desired level using the **Y+** and **Y-** buttons. Conclude by pressing **OK** or the **FS** button again:



3.3.2 Speed

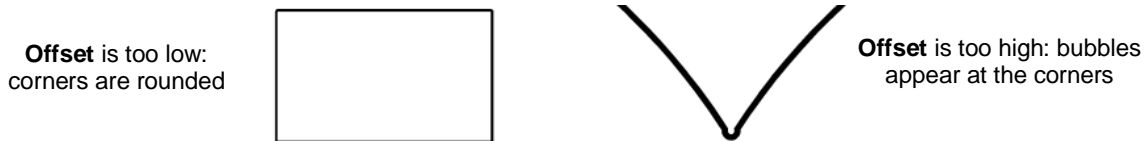
- **Speed** is how fast the blade travels.
- The Skycut has 13 speed settings ranging from “snail’s pace slow” to “insanely fast.”
 - ◇ The settings from 1 through 4 are the slow speeds and should be used when cutting dense difficult materials, such as chipboard, craft plastic, styrene, and balsa.
 - ◇ The settings from 5 through 8 are medium speeds and should be used for easy-to-cut materials, such as cardstock, vinyl, iron-on transfer, and rhinestone template material.
 - ◇ The settings from 9 through 12 are the fast speeds and are useful for engraving, embossing, and drawing. You may, however, find that some materials will cut well at the faster speeds.
- To change the setting, press the **FS** button and then using the **X-** and **X+** buttons, alter the **SPEED** to the desired level. Then press either the **OK** button or the **FS** button again.

3.3.3 Knife Offset (aka Blade Offset)


- **Knife Offset** is the horizontal distance from the center of the blade shaft to the tip of the blade. A pen or engraving tool has an offset of 0 because the tip is centered with the center of the pen/engraving tool shaft. But a blade is different:

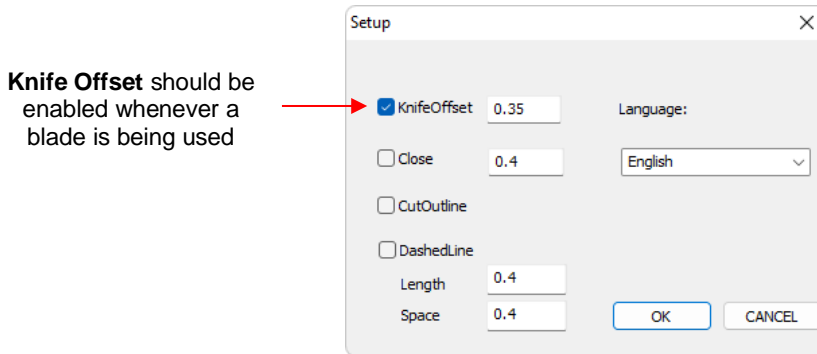


- If you set the **Knife Offset** to 0 when cutting with a blade, corners will be rounded. On the other hand, if it is set too high, bubbles will be cut on sharp corners:



- Currently it is recommended that a **Knife Offset** of between 0.25 – 0.35 be used for each of the three types of Skycut blades. Any time you order new blades, check for the recommended **Knife Offset** on the packaging. However, it's not unusual for blades to be slightly off-spec. Based on cutting a rectangle or square, increase or decrease the **Knife Offset** in increments of 0.1 or smaller until the shape has perfectly square corners.

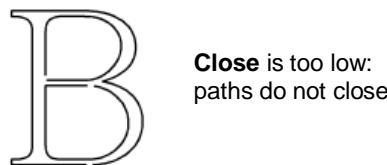
- To change the **Knife Offset** setting, press the **Set** icon  in Corel Draw:




Knife Offset should be enabled whenever a blade is being used

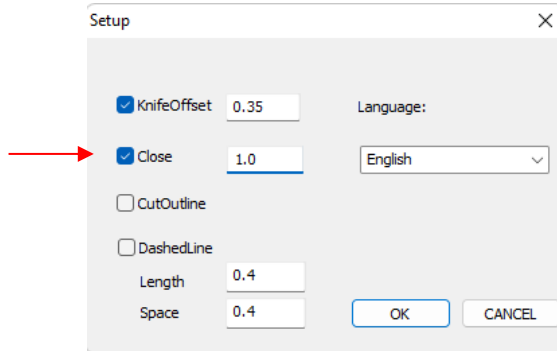
3.3.4 Close (aka Overcut)

- Close** is related to **Knife Offset** in that it isn't needed when using a pen, embosser, engraver, and so forth, because the tips of those tools are aligned with the center of the tools themselves. However, leaving **Close** at 0 when using the blade holder will result in large shapes not quite closing:



- In general, the blade type doesn't greatly affect the **Close** required. Try using 1.00 mm. In the event you cut a large closed shape, like an 8" circle, you may find that you'll need to increase **Close** to 2.00 mm.
- To change the **Close** setting, press the **Set** icon  in Corel Draw:

Close should be enabled whenever a blade is being used




3.4 Setting the Origin before Cutting

- Setting an origin is an important part of managing your material cost and controlling where your project will cut. Setting the origin consists of using the **X** and **Y** buttons to move the blade tip to a specific point on the cutter's X axis (left-to-right on the platen) and advance the media forwards or backwards.
- Once you have positioned the blade in a specific point over the media (typically close to the bottom right corner of the material), your origin is defined and you do not need to press anything before cutting.
- ***IMPORTANT!*** The Skycut EV24 has a maximum cutting width of 24 inches. If you move the head too far to the left to begin the cut and your project is wide, you may exceed the left side limit and cutting will stop at that point with no option but to abort.

3.5 Other Cut Setting Functions

- There are other functions and features available in the **Send to be Cut** window that may be useful depending on your application. Some have already been covered. Some will be covered in this section. Others will be covered in later parts of this manual. Note the section numbers for reference:
 - ◇ The **Advance** function is performed on the Skycut's control panel. Refer to *Section 1.9.1*.

3.5.1 Mirror

- Mirroring an image before cutting is used in applications such as:
 - ◇ Cutting HTV in which the material is placed faced down so that the heat protection layer is not penetrated by the blade
 - ◇ Cutting vinyl to be applied to the inside of a car or home window but primarily viewed from outside of the window
 - ◇ Cutting certain non-homogenous paper materials in which cutting upside down yields cleaner results
- To mirror a design, select it and click the **Mirror Horizontally** icon  at the top or go to **Window>Dockers>Transform**, select the **Scale and Mirror** tab, click the **Mirror Horizontally** icon, and click on **Apply**:




Before applying **Mirror**

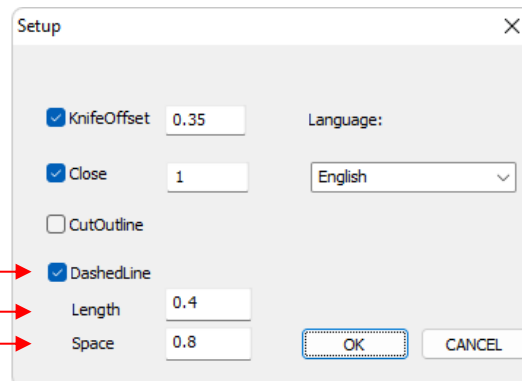


After applying **Mirror**

3.5.2 Dashed / Perforated Cutting

- To convert from solid cut to dashed line cutting, click the **Set** icon  to open the **Setup** window and enable the **DashedLine** option. Enter preferred values for the length of a dashed cut and the spacing between each dash:

Enable **DashedLine**
Enter values for
Length and **Space**



- ◇ Don't forget to disable this option before returning to normal solid line cutting.

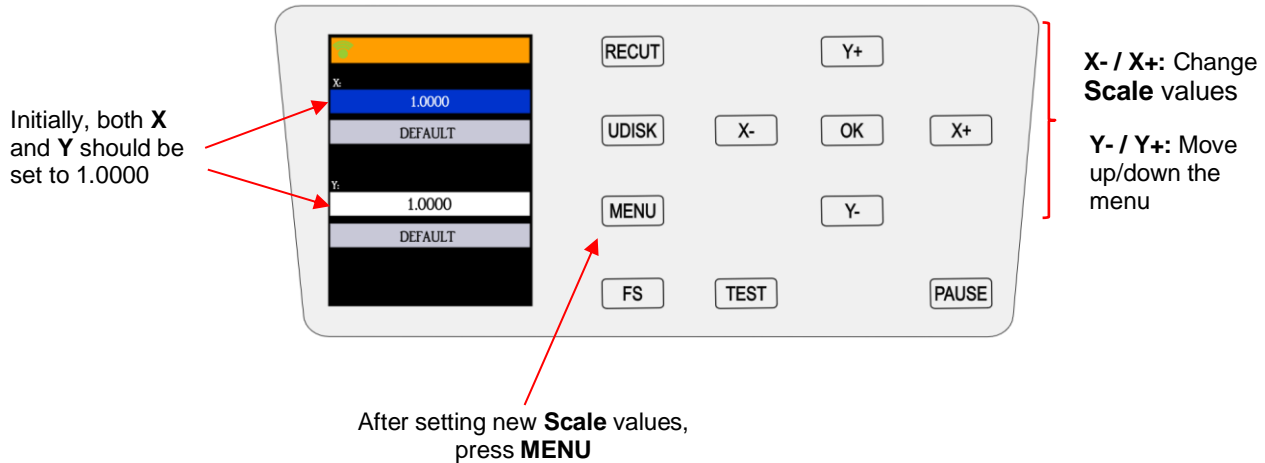
3.6 Important Checklist Before You Cut!

- Do you have your material on the mat and the mat inserted into the Skycut? (Note: materials with a backing sheet, such as vinyl and iron-on transfer do not require a mat for cutting)
- Have you selected pinch wheels positions that are roughly the same distance from the outside edges of the cutting mat (or material, if not using the mat)?
- Are the pinch wheels in use centered over grit shafts (located below the white rectangle labels)?
- Have you set the blade length/exposure based on the thickness of the material you are cutting?
- Do you have the blade holder firmly mounted in the blade holder seat?
- Have you set the **Origin** (location of the blade tip) at the bottom right corner of your material (or wherever you need the origin to be)?
- Have you set the **Force**? And the **Speed**? Do you need to do a test cut?
- Have you enabled both **Knife Offset** and **Close** in the **Set** window?
- Do you need to **Rotate** or **Mirror** the shapes before cutting?

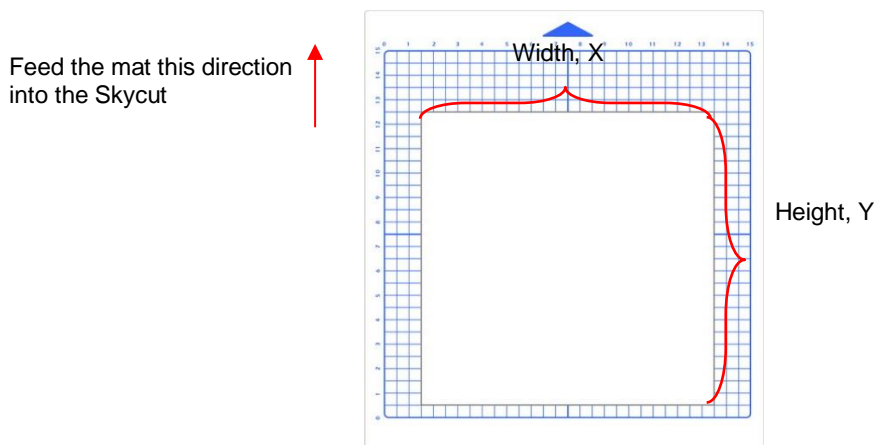
3.7 Scale Calibration

- If you were to cut out any particular shape, for example, a 10" x 10" square, you might find that it actually measures 9-15/16" x 10-1/32". It will be very close to 10" x 10" but perhaps just slightly smaller or larger in either or both dimensions. Now this might be perfectly acceptable for the type of cutting you do. Therefore, it may not even be necessary to do this particular calibration. However, if you do want to make sure your shapes are cut precisely to scale, the following procedure will allow you to calibrate your Skycut.

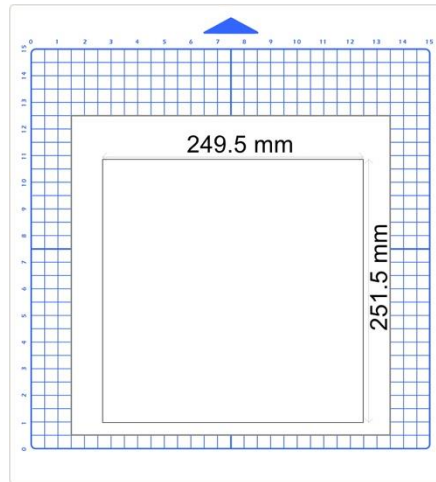
- The calibration process can be conducted in whatever units you prefer because, in the end, the value you enter is a ratio. In general, it is recommended that mm be used, because it is easier to estimate decimal values in metric. However, if you do not have a metric ruler, then you can use inches instead.
- Before beginning this calibration, make sure the **Scale** setting on the Skycut itself is still set to 1.0 and 1.0. On the control panel, go to **MENU>Scale**. The following window opens where you can verify that the current **X** and **Y Scale** values are both set to 1.0000. Then return to the main screen.



- For this calibration, you will need the following:
 - ◇ Large sheet of paper (the larger the test, the more accurate the calibration)
 - ◇ Test pen
 - ◇ Ruler
 - ◇ Calculator (or access to the Internet)
- In Corel Draw, add a square using the **Rectangle** tool (left side panel). Resize the shape to dimensions that will be easy to remember, such as 250 mm x 250 mm (or perhaps 10" x 10", if working in inches).
- Draw the square on your paper using the test pen. Then, using your ruler, carefully measure the **Width** (the left-to-right length that drew) and the **Height** (the top-to-bottom length that drew. It's the same as shown below:



- Write those measurements onto your sheet:



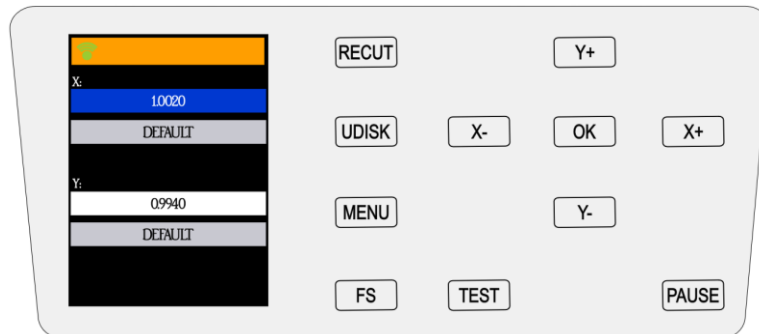
- To calculate the **SCALE**, divide the *design dimension* by the *actual drawn dimension* times the current **SCALE**. Thus, if you draw a 250 mm square and it measures ~ 249.5 mm (left-to-right), then:

$$\mathbf{X \text{ SCALE}} = 250 \text{ mm} \div 249.5 \text{ mm} \times 1 = 1.002$$

- Repeat for **Y SCALE**. In this example, assume the Y side measured 251.5 mm so the calculated **Y SCALE** is:

$$\mathbf{Y \text{ SCALE}} = 250 \text{ mm} \div 251.5 \text{ mm} \times 1 = 0.994$$

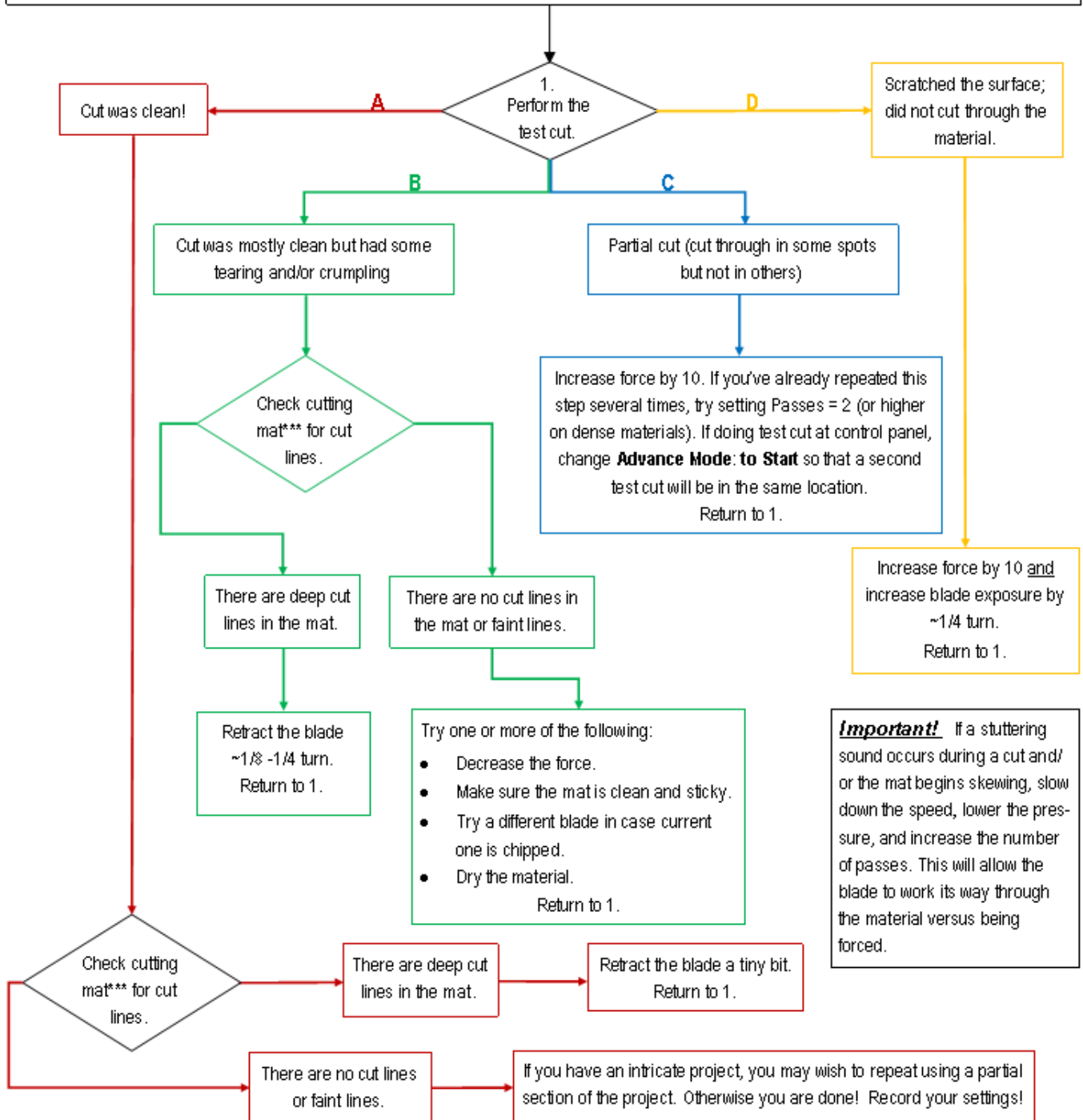
- Return to the **SCALE** screen and enter the values using the **X** and **Y** buttons:



- Repeat the test to verify the dimensions are correct. If you still need to adjust, repeat the calculation with the newly measured dimensions but remember to also multiply by the **SCALE** numbers you entered into the **SCALE** screen. Then enter those new **SCALE** values and test again.

3.8 Test Cutting Flow Chart for the Skycut

- Select a small test shape. You can use the built-in test on the Skycut but a better shape is one with a small internal shape as it allows you to more easily check to see if the blade is cutting into the backing sheet or cutting mat.
- Start with conservative Force and Speed. Refer to a similar material in the *Suggested Settings Table* in Section 3.9
- Set the origin in the lower right corner of the material and proceed with Step 1 below. Based on the cut, follow Path **A**, **B**, **C**, or **D** based on the result of the test cut. Read each box along the path and make changes accordingly. Return to Step 1 and repeat the test cut. Eventually, you should end up at the last box on Path **A**.



*** or backing sheet, such as with vinyl

3.9 Settings Form for Cutting Materials

<u>Material</u>	<u>Material Brand or Source</u>	<u>Blade</u>	<u>Force</u>	<u>Speed</u>	<u>Knife Offset</u>	<u># Passes</u>	<u>Other Comments</u>

3.10 Suggested Settings for Various Materials

IMPORTANT: These settings should be used for the initial test cut only. Adjustments may be necessary based on the condition of the blade, variations in the material, humidity, condition of the cutting mat, blade tip height, etc. Refer to *Section 3.8* for a guide to adjusting settings for optimizing the test cut.

Note: Speed settings are based on the number in parentheses in the **Cutter Control** tab.

Material Type	Material Brand/Source	Blade	Passes	Force	Speed	Other Comments
Cardstock: light	Light 65 lb (~176 gsm) Recollections	R	1	35	8	
Cardstock: medium	Medium: Textured Bazzill	R	1	40	8	Blade tip ht = 40 Post It notes
Cardstock: heavy	Accent Opaque 270 gsm (100 lb cover)	R	1	75	5	
Chipboard: cereal box	0.018" (0.4 mm)	B	1	50	5	Alt 2 passes at 40
Chipboard	0.022" (0.5 mm)	B	2	75	5	
Chipboard	0.03" (0.76mm)	B	2	95	5	
Chipboard	0.06" (1.5mm)	B: left R: right	3: on both	75: on both	1: on both	Duplicated image- right side cut / half-blade exposure; left side cut at required blade exposure; Blade tip ht = 20 Post It notes
Clay	Use a clay press (or pastry machine) to make clay thin	B	1	11	10	Make sure pinch wheels will not cross over the clay. Blade holder mounted on top of black seat.
Copy Paper	Most any brand	R	1	30	8	
Fabric - Cork	embroiderygarden.com	B	2	40	5	Blade tip ht = 25 Post It notes; use an extra sticky mat and taped around edges. Brayered well.
Faux Leather	~ 1.2 mm thick from Art of Fabric Folding (on Etsy)	B	1	50	6	Extra sticky mat w/ material upside down. (mirror imagem, as needed)
Faux Leather	AOUXSEEM 1 mm (available on Amazon)	B	2	50	8	Extra sticky mat w/ material upside down. (mirror imagem, as needed)
Foam - Plain	2 mm	B	2	25	10	
Foam - Glitter	Foamy - 2 mm	R	2	15	10	
Magnet	Marietta Magnetics - 0.02" (0.5mm) (20 mil)	B	2	90	8	
Magnet	0.035" (0.9mm)	B	2	50	3	Alt 1 pass at 85
Magnet	Marietta Magnetics - 0.02" (0.5mm) (20 mil)	B	2	90	8	

Material Type	Material Brand/Source	Blade	Passes	Force	Speed	Other Comments
Tracing Paper	Helix Vellum Paper	R	1	30	8	
Vinyl - Heat Transfer	Siser EasySubli - with the mat	R	1	30	8	Cut on the mat
Vinyl - Heat Transfer	Siser Glitter - Gold - No cutting mat	R	2	35-40	7	2 passes makes it easier to weed, also slight scratch cut in the backing layer
Vinyl - Heat Transfer	Siser Glitter - Gold - with the mat	R	2	45-50	7	2 passes makes it easier to weed, also slight scratch cut in the backing layer
Vinyl - Wall (no mat)	Vinyl - Oracal 631 - yellow	R	1	25	8	
Vinyl - Wall (on mat)	Vinyl - Oracal 631 - yellow	R	1	30	8	
Vinyl - Waterproof	Papilio	R	1	30	8	

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- The latest updates to these settings can be found [at this link](#).

Appendix A Troubleshooting FAQ's

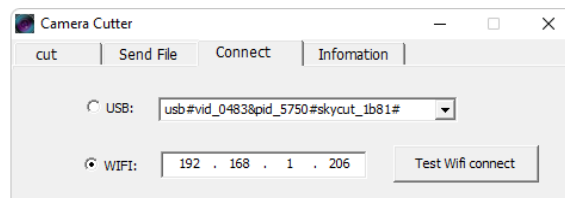
A1 Communication Issues

I cannot get the Skycut to power on.

- Make sure the power cable is securely plugged into the Skycut's port on the left side and securely plugged into a wall socket or a power strip.
 - If it still fails, check the wall socket or power strip with another device, such as a table lamp.
 - If you still cannot get the Skycut powered on, contact your dealer.
-

I cannot get Wi-Fi to work with my Skycut.

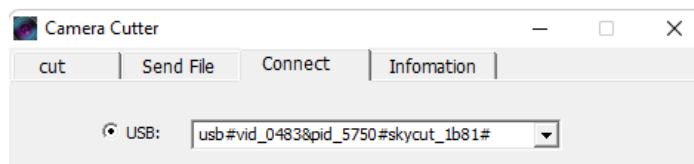
- Set the Skycut close to the router when performing the initial setup presented in *Section 2.3.2*. After establishing communication, you can test how far the Skycut can be located from your router.
- On the **Cut>Connect** tab, make sure you have selected **WIFI** and entered the same **IP address** you selected during setup on the Skycut's control panel:



- Make sure your computer is connected to the same router as your Skycut.
 - If the number you see on the control panel orange strip reads 192.168.16.254, you have NOT connected to your router. That is the default **IP address** for a stand-alone connection. You need to repeat the scan procedure and make sure you see the correct **IP Address** appear.
 - Some routers will not accept 200 or higher as an **IP Address** assignment. Try 151 instead.
 - Some routers assign the same name to both the 2.4G and 5G networks and because the Skycut's Wi-Fi chip only works on 2.4G, you might need to rename your 2.4G network to a different name.
-

I cannot get USB to work with my Skycut.

- Unplug/replug the USB cable at both the computer and at the Skycut.
- On the **Cut>Connect** tab, make sure you have **USB** selected and the connection contains the word "skycut" in it:



- Try a different USB port on your computer.
- Try a different USB cable.

A2 Operating Issues

My mat is rotating when the Skycut starts to cut!

- Two pinch wheels need to be gripping the mat. Move the mat either left or right so that it is under two outer pinch wheels and the pinch wheels are aligned under white arrows. Refer to *Section 1.08*.
- Make sure you are not trying to force the blade to cut too deeply and/or too quickly through a thick/dense material like chipboard or craft plastic. Slow the speed, decrease the **Force**, and add use more passes.

My vinyl isn't feeding evenly while cutting. It starts bunching up on the inside of the end cap.

- Even if you feel the vinyl is aligned properly at the start of the cut, a slight "out of alignment" error will become more pronounced with a long cut. When you first drop the pinch wheels, use the arrow keys to feed the vinyl for the length of the cut to make sure it is feeding straight. If not, then about half-way through the length of the vinyl needed, lift the pinch wheels and realign the vinyl. Continue testing the alignment until you can verify that the vinyl is sufficiently aligned for the entirety of your project.

The pinch rollers are not tight enough to hold the vinyl I'm cutting. The vinyl is slipping and rotating when I start the cut.

- The pinch wheels need to be over grit shafts (the dark gray rough areas along the revolving shaft. The white rectangles will help you align the pinch wheels in correct locations. Also, use outside locations versus having, say, one pinch on the far right of the vinyl and a second pinch wheel only in the middle.

I hear a terrible stuttering sound when trying to cut chipboard (or other thick dense material).

- That can be a symptom of forcing the blade to cut too deeply and/or too quickly through the chipboard. Slow the speed, decrease the **Force**, and use more passes.

The Skycut stopped during a cut.

- If the Skycut stops with the head over on the left side of the cutter, you have most likely exceeded the cutting range. Several things to consider:
 - ◇ Check the width of your project. It cannot exceed 24."
 - ◇ Check how far you are moving the head to the left when setting the origin. If your project is 21" and you moved the head more than 3" to the left, you will send the cut out of range and the cutter will stop.
- If the Skycut stops and the head is not located near the left side:
 - ◇ Make sure it's not a communication issue.

- ◇ You may have exceeded a buffer limit. Try reducing the number of nodes.
-

A3 Cutting/Drawing Issues

I'm getting some stray cuts added, as if the cutter is going a bit crazy.

- Extra stray cuts can occur anywhere, including sharp V-shaped cuts jutting outside the borders of the project. These are referred to as random cuts and are difficult to diagnose. But based on experiences reported by owners of professional vinyl cutters, here are some possible causes to check:
 - ◇ Bad or defective USB cable
 - ◇ Cutter is plugged into a power strip that isn't rated highly
 - ◇ Static electricity (many vinyl pros recommend grounding cutters to prevent random cutting due to static)
 - ◇ Unknown cause – sometimes a quirk in the file might cause something strange to happen such as a stray cut or a sudden stoppage. Try altering the file in some way, such as reducing nodes.
-

My shapes are drawing (cutting) off the material. What am I doing wrong?

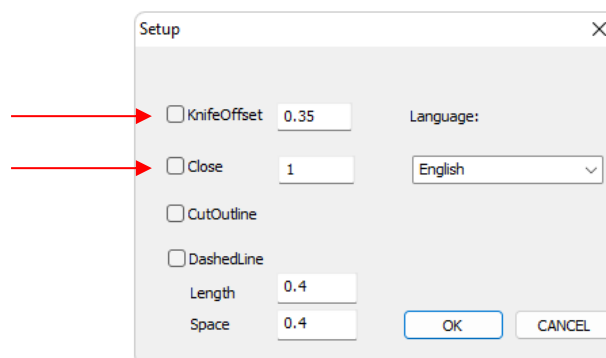
- When setting the origin, make sure you are using the tip of the blade as the reference point and set the tip inside the corner of the material (not too close to an outside edge).
-

When drawing with the test pen, I have extra lines being drawn.

- Make sure you raise the pen in the blade holder seat on the Skycut before tightening the screw. The blade holder seat needs to be able to drop the tool down when it reaches the spot to start the shape. Otherwise, the tool tip will be dragging across the material from the origin to where the shape will begin and then back to the origin at the end of the “cut”.
-

I'm drawing with a pen and there are bubbles at the corners.

- For perfect corners when using a pen, click the **Set** icon to open the **Setup** window and disable the **KnifeOffset** option. You can also disable **Close** as it is also not needed when using the test pen (or scratch engraver, scoring/creasing tool, etc.).



My cut started out fine but by the end of the cut, it's not cutting through the material.

- Make sure the blade holder housing doesn't have any bits of material inside of it.
- Make sure the screw on the blade holder seat is hand-tight so that the blade holder isn't slipping upwards during the cut.
- Make sure the cutting mat is clean and sticky and the material is pressed down completely, so that the material remains stabilized during the cut.
- Make sure the blade isn't cutting too deep into the mat. This can sometimes cause the material to be pulled up and away from the mat as the blade releases from the plastic it is cutting.
- Try increasing the Force by ~ 5 – 10.

My cut is clean in some places but not in others. Why am I not getting consistent cutting?

- Make sure your material is pressed firmly onto a clean and sticky mat (assuming you are cutting a material such as paper or cardstock).
- Your material may require two passes if it's not homogenous or if it is heavily textured. Sometimes intricate shapes also cut better with two passes.
- Also, if the material has been exposed to humidity, then it will become difficult to cut in one pass. You can dry both paper and cardstock using a blow dryer or in a very low-temperature oven.
- If you are cutting vinyl without a cutting mat, check the cutting strip to make sure it is still in good condition.

I have the outside edges of my chipboard completely taped but I'm not getting clean cuts, even after lots of passes.

- Taping the edges prevents shifting of the chipboard but it's not enough for stabilizing. You need to thoroughly press the entire surface of the chipboard onto a clean and sticky mat. Using a brayer is recommended.

I am getting a lot of tearing in my cuts.

- A number of things can cause tearing so work through this check list:
 - ◇ Too much blade is exposed. If you see cut lines in your mat or the backing sheet, shorten the blade exposure. You should only be cutting through the material itself.
 - ◇ The blade is chipped. Try a different blade.
 - ◇ The paper is not adhered well to the mat. Make sure the mat is clean, sticky, and the paper is pressed smoothly and evenly on the surface.
 - ◇ You may be using too much **Force**. Try reducing it and doing test cuts.
 - ◇ You may have too many nodes in the shape.
 - ◇ The material itself may be subject to tearing, especially on intricate cuts. Also, if the cardstock has been exposed to humidity, then the moisture in the material can make it difficult to cut cleanly. You can dry paper and cardstock using a blow dryer or in a very low-temperature oven.

I'm cutting very small lettering and the letters are a bit distorted.

- Verify that you are using the correct **Knife Offset**.
 - Try slowing down the cut. Small lettering needs a slower speed.
-

My cut shapes are not the same dimensions as what they are set to in Corel Draw.

- Perform the calibration procedure shown in *Section 3.7*.
-

My shapes are not completely cutting out. They are still attached to the waste part of the material.

- Make sure you have set an appropriate **Close** setting.
 - Make sure the mat is not skewing during the cut. This can happen if even one of the pinch wheels is no longer centered under a white arrow. It can also happen if the speed and/or pressure is set too high.
-

My cardstock is not cutting all the way through. I have the blade all the way out and using the maximum force.

- Please refer to *Section 1.7.4*. It's important to only have as much blade exposed as is necessary to penetrate the cardstock.
 - Do not use more force than is needed. If the cardstock is cutting through about 90% of the cut, then use a second pass. Some cardstocks do better with a second pass at a lower force.
-

Appendix B: Wireless Stand-Alone Connection

- It's usually best to connect the Skycut while it is next to the wireless computer. Once connectivity is established, you can then experiment to see how far from the computer the Skycut can be located.
- There are two situations to consider before getting started. If you are not sure which applies to your Skycut, then select *B* and go to that section first.
 - A. The Skycut has never been set up wirelessly to a network.
 - B. The Skycut has previously been connected to a wireless network.

A. The Skycut has never been set up wirelessly to a network

- Power on the Skycut and wait for the light to come on. In the orange strip on the control panel, it should read either "Hi-Link" or "Cutter", followed by some alphanumeric characters and then the IP Address: 192.168.16.254. If something else is shown there, proceed to *Section B*.
- On your computer, open your list of available networks. In the list, you should see one with this type of name format (i.e. Hi-Link XXXX or Cutter XXXX).
- Select that network and enter the following **Network Key** when prompted: 12345678
- Proceed to *Step 9* in *Section 2.3.2*. Remember that your computer will not have access to the Internet or other network devices while in **Wireless Stand-alone** mode.

B. The Skycut has previously been connected to a network

- On the control panel, press the **MENU** button, select **WIFI**, and press **OK**. Use the **Y-** button to move down to highlight **Default** and press **OK**.



- Wait a minute or two and the default **IP Address** will then appear in the orange strip at the top of the display.
- On the control panel, select **Set** and then select **Wifi**. The **Wifi screen** will appear:



- To reset the Skycut so that it will be found as an available network, press and hold the **Default** button for 3 seconds. Release and you should then see the **Apply** button displaying **Wait**. In a minute the **Apply** should return and you can then proceed back to A and use the same procedure as if the Skycut was never set up on a network.