



muse artisan

User Manual

1

Introduction and Safety

1.0 Support

Thank you for choosing an ARTisan vinyl cutter.

For ARTisan support, please go to

<https://techsupport.signwarehouse.com/muse-vinyl-cutter-support-resources/>

1.1 Safety & Warnings

Please read the following safety guidelines regarding use of your Muse cutter:



Symbols inside triangles represent important notes that warrant your full attention. There are different symbols denoting specific warnings. The symbol at left, for example, warns of a possible danger of electric shock.



The cross-bar indicates activities that are prohibited because of risk of injury or possible damage to your equipment. This particular symbol at left warns against the use of tools to remove parts of the equipment.



Don't use with an electrical power source which doesn't meet the required voltage rating. Using with substandard sources of electricity may result in fire or electric shock.



Don't use your ARTisan if it begins to emit an odor or smoke.



Don't un-plug your ARTisan while powered on. Doing so may damage the equipment.



Make sure your ARTisan is grounded. Using your ARTisan without it being grounded may result in risk of equipment damage or electric shock.



Don't disassemble your ARTisan or attempt repairs unless directed by SignWarehouse technical support.



Don't drop any liquids or metal objects into your ARTisan. Liquids or impact from hard or heavy objects may damage the equipment.



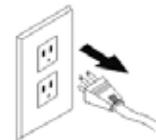
Touching your ARTisan's blade with your finger may result in injury.



Don't damage or replace the power cable supplied with the vinyl cutter. Don't excessively bend, pull, or fold the power cable or place weight on it. Crimping the power cable may result in risk of failure or electric shock.



If you're not going to use your ARTisan for a long time, unplug the power cable from the outlet.



Placing your hands on the cutting platen during operation may result in injury.



Place your cutter on a stable surface. Operating the vinyl cutter on an unstable surface may result in a fall that can damage the equipment or internal components.



To unplug the power cable from a receptacle, always grasp the plug instead of the cable. Pulling the cable may damage it and increase the risk of fire or electric shock.



Don't operate during an electrical storm where lightning is present. For protection against power surges, a surge protector is recommended.



Don't physically move the cutting head while your ARTisan is powered on. Manually moving the cutting head during operation may damage the main board.

1.2 Warranty

The ARTisan cutter comes with a one-year parts warranty. If you have any questions about your cutter's warranty, please contact SIGNWarehouse via our warranty claim form at techsupport.signwarehouse.com.

It is recommended that you keep your original box with the Styrofoam packing materials in case your ARTisan must be shipped or returned to SIGNWarehouse.

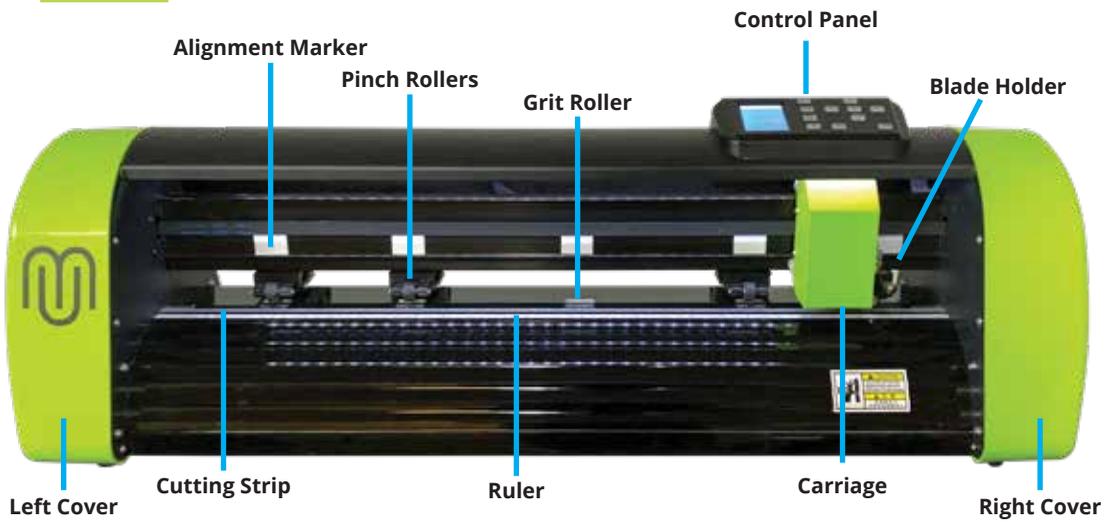
1.3 ARTisan Contents

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

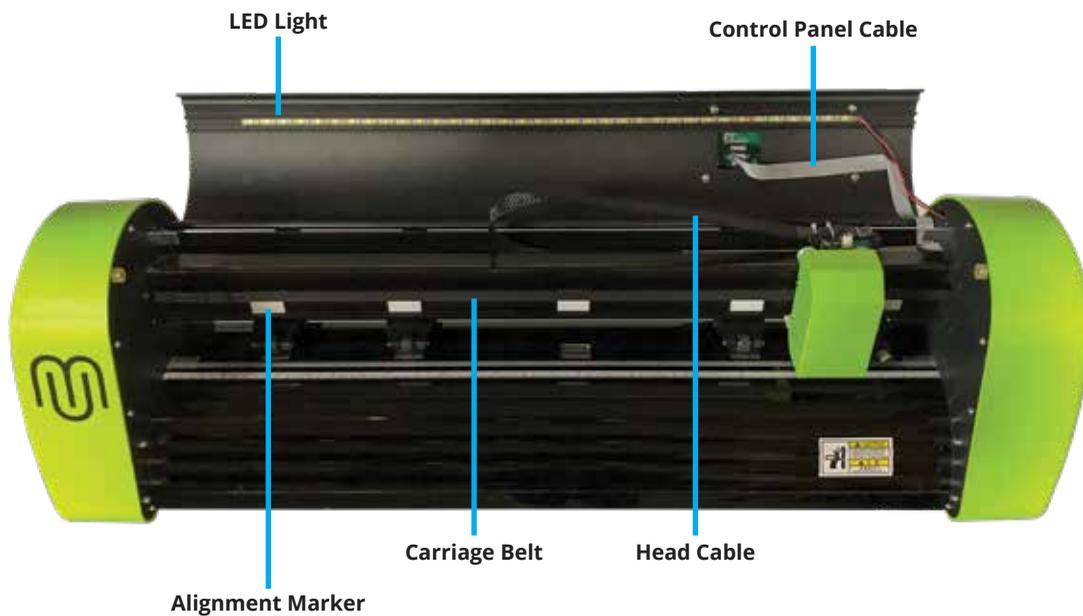


1.4 Parts of the ARTisan Cutter

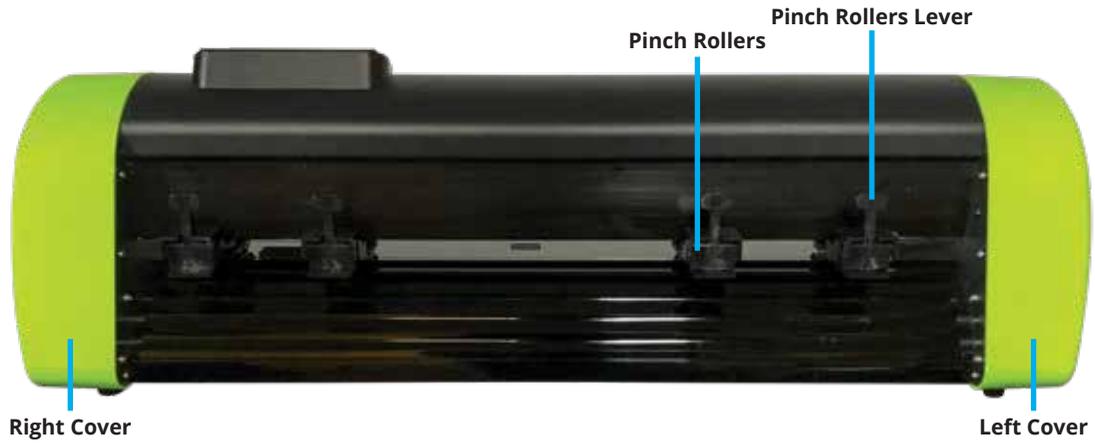
1.4.1 Front of the ARTisan Cutter



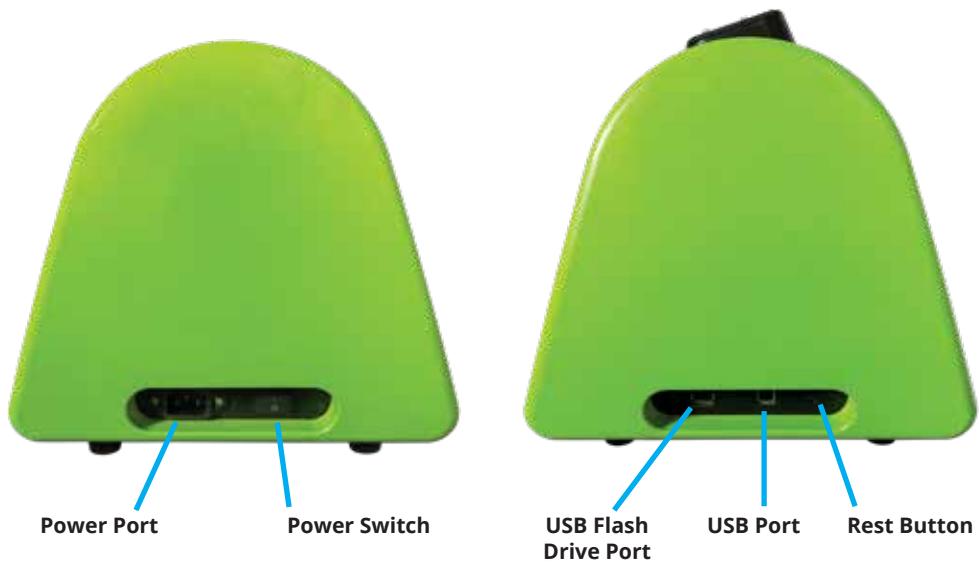
1.4.2 Front of the ARTisan Cutter with Cover Open



1.4.3 Back of the ARTisan Cutter



1.4.4 Sides of the ARTisan Cutter



1.5 Accessories

1.5.1 Test Pen

The test pen is used in calibrating the **Scale** (Section 2.6) and is also recommended for test drawing while you are learning where shapes will cut based on various software settings. 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 ARTisan:



1.5.2 ARTisan Blades

There are two kinds of blades that came with your ARTisan:

1. The 45° **red** capped blade is well-suited for cutting thinner materials such as heat transfer vinyl and wall/auto/decal vinyl
2. The 60° **blue** capped blade has a longer cutting edge and is well-suited for cutting thicker materials like reflective vinyl, some heat transfer film, sandblast stencil, magnet sheets, light chipboard, etc.



Installing the blades into the blade holder is covered in Section 2.1. **Blade Offset** and **Overcut** are covered in Section 2.2.

1.6 Pinch Rollers

Your ARTisan is designed for cutting rolls and sheets of adhesive-backed films such as vinyl, stencil mask and sandblast etching films. It can also use the included cutting mat for non-backed materials such as paper, cardstock, magnet sheets, and Mylar.

There are individual levers on each pinch wheel which are lifted to raise the rollers or gently dropped to lower the rollers onto the material or cutting mat.

Insert the media into the space between the pinch rollers and grit rollers and pull out the media far enough to ensure that it is loaded straight. The edges of the vinyl should be parallel to the left and the right frame of the cutting platen. [A 'platen' is the lower plate that supports the vinyl as it passes through the cutter.]

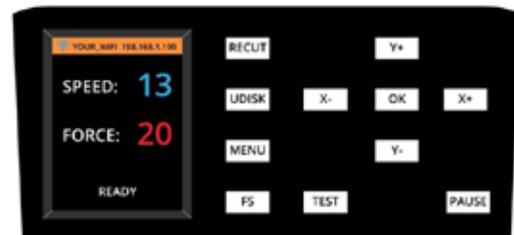
Slide the pinch roller assemblies left and right so that the pinch rollers are centered over the grit rollers. The positions of the exposed grit rollers in the platen are marked by white rectangles above the platen.

Once the pinch rollers are in position, lower them to keep your media in place. When using the cutting mat, you need at least two wheels near the outside edges of the mat, thus center the mat inside the cutter (versus having it all the way to one side).

1.7 Control Panel

When you first power on the ARTisan, 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 job which is stored in the ARTisan's memory.

UDISK: Opens the **UDISK** window allowing access to files on a USB thumb drive plugged into the ARTisan's USB Flash Drive port. Files must be saved in .PLT format to appear in the menu [See Sections 1.9.6 – 1.9.8 for details].

MENU: Opens a menu of additional functions [See Section 1.7.1 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 Section 2.2.1].

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.

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 settings changes.

1.7.1 Menu

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

WIFI: Connect the ARTisan to your home or office router for wireless connectivity [refer to *Sections 1.9.4 and 1.9.5*].

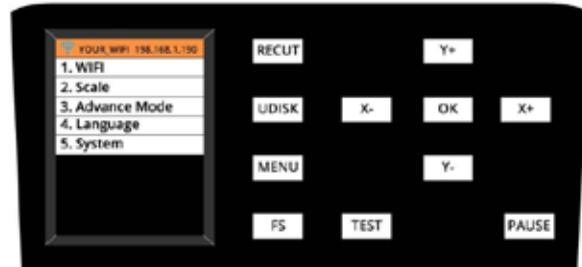
SCALE: This setting is used to input the sizing calibration [refer to *Section 2.6*].

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
- **To LEFT:** advance the blade holder to the left of the completed cut with the option to move an additional distance

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 SignWarehouse technical representative.



1.8 Registering and Installing the Design Software

Depending on which software you purchased with your ARTisan vinyl cutter, there are two ways to set it up:

1. You'll find complete step-by-step instructions on our Product Support Blog for LXi 12. Please click here to access the setup tutorial or go to <https://techsupport.signwarehouse.com/>
2. To install Create Space, download the software from the following link [note there are separate links for Mac and Windows users]. You will also find a video to assist you with installation and activation of your registration number:

<https://techsupport.signwarehouse.com/create-space-software-support-resources/>



1.9 Connecting the ARTisan to Your Computer

Place your ARTisan on a sturdy horizontal surface or mount to the included cutter stand. Keep the area around the ARTisan free of clutter and unnecessary items. This will prevent other objects from obstructing normal feeding of media through the cutter. Impacts with items around the cutter can cause a material to lift off the platen or feed incorrectly. Either of these can negatively impact cut quality and/or tracking.

Connect the power cable to a wall outlet or power strip and the other end into the power outlet on the left cover. To turn on the power flip the switch up on the same left cover. The same switch is used to power off.

The ARTisan will take a few seconds to power up. The LED light will come on and the tool carriage will engage. **IMPORTANT:** Once the cutter is on, do not attempt to move the tool carriage manually. This can damage the tool carriage and/or main board. Use only the buttons on the control panel to move the tool carriage.

There are 3 ways that you can connect your ARTisan to the computer:

1. USB Cable
2. Wi-Fi
3. USB Flash Drive

You may choose any one of these three connectivity options. You can also change from one to the other at will, but for best results use one at a time. Here are the benefits of each connectivity option:

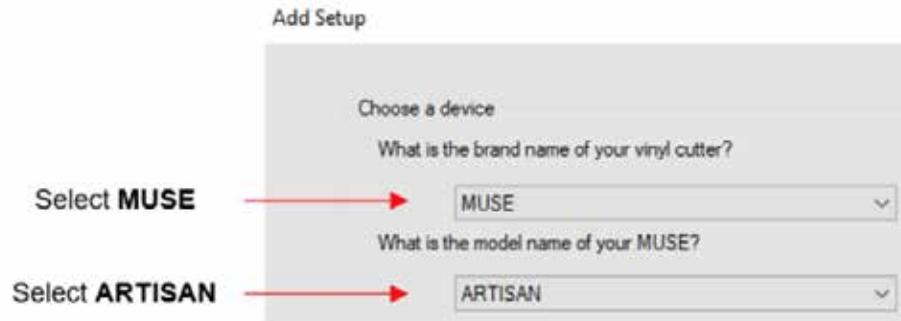
1. The USB cable is the simplest and most reliable connection. Setup is quick and easy. See *Sections 1.9.1 or 1.9.2* for instructions.
2. Wi-Fi takes a little more time and care to set up but offers a wireless environment in which the cutter can be used without being connected to the computer on which the software is installed. See *Section 1.9.3* and *Section 1.9.4 or 1.9.5* for detailed instructions.
3. The USB flash drive option allows you to use the cutter without being connected to the PC. Files can be saved from the design station computer in .PLT format and transferred to the cutter using a USB thumb drive. See *Sections 1.9.6 - 1.9.8*.

1.9.1 USB Connection in LXi

Turn on the ARTisan before connecting to your computer. Using the USB cable that came with the cutter, plug the wider end into your computer's USB port and the squarish end into the cutter's USB port which is on the right cover.

Open LXi Production Manager. If this is your first time opening LXi, a popup screen will request a **Brand** and **Model** selection. Otherwise, select **Setup** and from the drop-down menu, click **Add Setup**.

From the pop-up window, choose *MUSE* as the **Brand**. Find and select *ARTISAN* as the **Model**:



Click **Next**. The setup window will ask how your ARTisan is connected to the computer. Open the drop-down menu and select the largest available option for **USB_Printer_X** where X will be 0, 1, 2, etc. For example, if you see both **USB_Printer_0** and **USB_Printer_1** then you would select **USB_Printer_1** because it is the higher of the two.



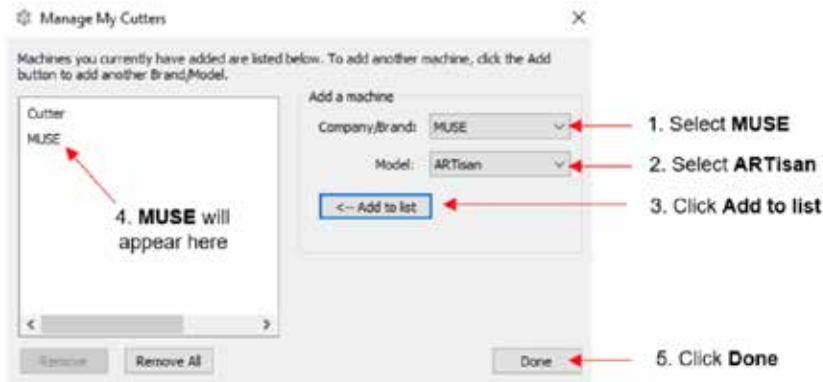
Click on **Finish** at the bottom of the **Add Setup** window.

1.9.2 USB Connection in Create Space

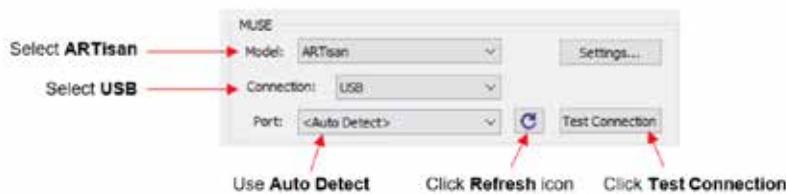
Turn on the ARTisan before connecting to your computer. Using the USB cable that came with the cutter, plug the wider end into your computer's USB port, and the squarish end into the cutter's USB port which is on the right cover.

Open **Create Space** and select **New Project**.

Go to **Cutter>My Cutter>Manage Cutters** and a new window will open. On the right side, under **Company/Brand** select *MUSE* and under **Model** select *ARTisan*. Click **Add to list**. Click **Done** to apply and close the window.



Once you are ready to cut, click the **Cutter** icon on the **Toolbar** at the top of the screen. The **Cut Settings** window will open and, in the **Connection** drop-down menu, select **USB**. You can leave **Port** set to **Auto Detect**. If you click on **Test Connection**, it should move the blade carriage back and forth one time. This does not send a cut, just a signal to the cutter.

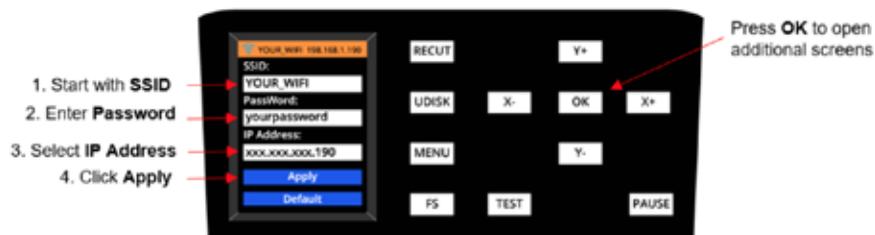


1.9.3 Connecting the ARTisan to a Wi-Fi Network

For initial setup using the Wi-Fi option, you may need to place the ARTisan 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.

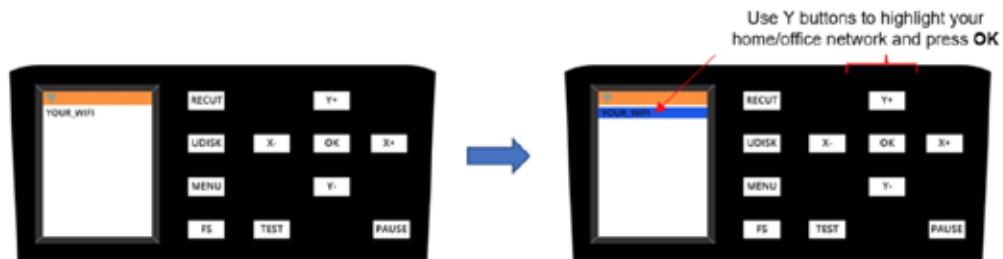
You will need the name of the network and the password.

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:

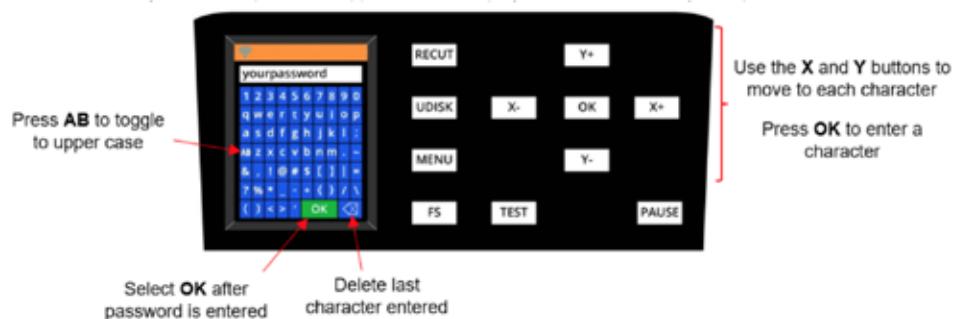


Work in order downwards, starting with SSID:

1. Use the Y buttons to highlight SSID in blue. Then press OK and the ARTisan 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.



2. 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.



3. 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 ARTisan 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 ARTisan 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:

On a PC:

Click on the **Network** icon.
(usually in lower right corner)



On a Mac:

Click on the **Network** icon.
(usually in upper right corner)



If you are connected via
Ethernet, your network icon
may look like this.

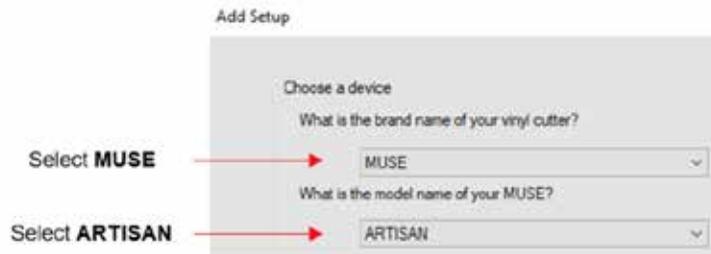


8. A menu of available networks will appear. Select the network used for the ARTisan setup and, if needed, enter the network password. Wait a bit for the connection to be made and the menu should indicate you are now connected to that network.
9. Proceed to either the next section (if using LXi Production Manager) or *Section 1.9.5* (if using Create Space).

1.9.4 Wi-Fi Connection in LXi

Open LXi Production Manager. If this is your first time opening LXi, a pop-up screen will request a **Brand** and **Model** selection. Otherwise, select **Setup** and from the drop-down menu, click **Add Setup**.

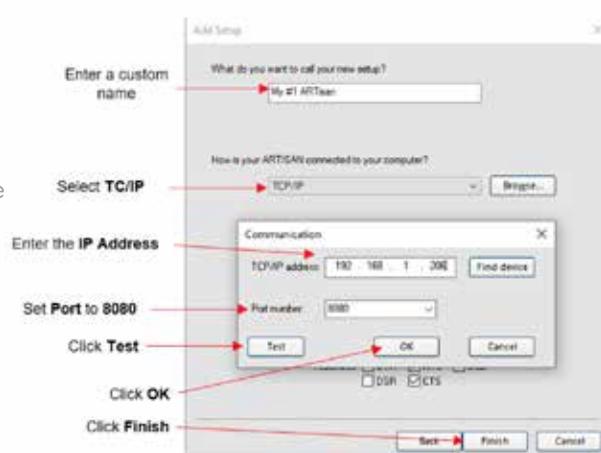
From the pop-up window, choose *MUSE* as the Brand. Find and select *ARTISAN* in the **Model** window:



Click **Next**. You will be asked how your ARTisan is connected to the computer. Select **TCP/IP**. A small window will appear in which you can type in the cutter's **IP Address** from *Step 5* in *Section 1.9.3*

Below **TCP/ IP address**, you will need to enter the correct **Port number** which is **8080**. Enter this value and click **Test**. If you have a successful connection, LXi will indicate success. Click on **OK** to close the **Communication** window. Click on **Finish** at the bottom of the **Add Setup** window.

If **Test** fails, check the ARTisan again to verify the network name and the **IP address**. If you change settings, it may be necessary to wait a minute and start from the beginning of the process in order to allow the computer time to reset and recognize the Wi-Fi connection.



1.9.5 Wi-Fi Connection in Create Space

Open Create Space and select **New Project**.

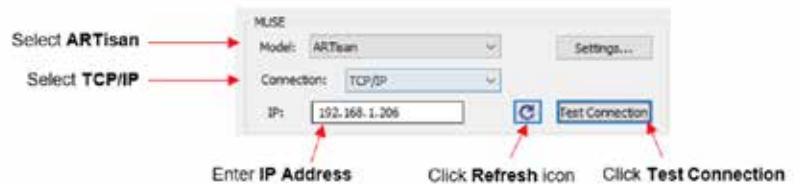
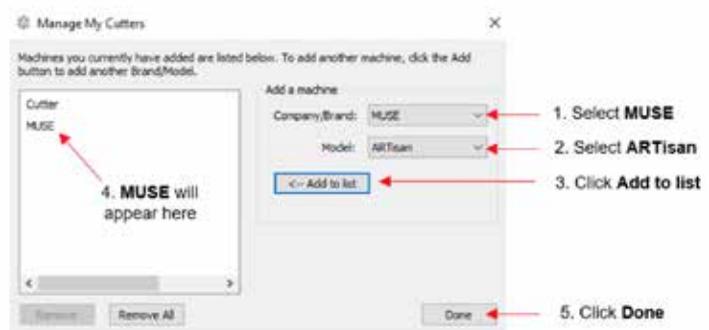
Go to **Cutter>My Cutter>Manage Cutters**.

A new window will open. On the right side, under **Company/Brand** select *MUSE* and under **Model** select *ARTisan*. Click **Add to list**. Click **Done** to apply and close the window:

Once you are ready to cut, click the **Cutter** icon on the **Toolbar** at the top of the screen. The **Cut Settings** window will open and, in the **Connection** drop-down menu, select **TCP/IP**

In the **IP** field, type in the **IP Address** from *Step 5* in *Section 1.9.3*.

Once you type in the **IP address**, click on **Test Connection**, it will move the blade carriage back and forth. This does not send a cut, just a signal to the cutter. If not connected, check the **ARTisan** again to verify the network name and the **IP address**. If you change settings, it may be necessary to wait a minute and start from the beginning of the process in order to allow the computer time to reset and recognize the Wi-Fi connection.



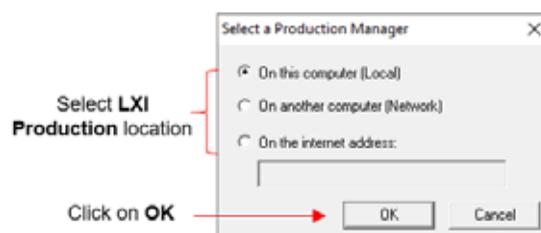
1.9.6 USB Flash Drive Setup in LXi

If you are new to LXi, follow the first few steps in *Section 1.9.1* to add the Muse to LXi Production Manager.

Using the **UDISK** (USB thumb drive) option involves saving a **.PLT** file containing the cut design and some or all of the cut settings. This file can then be opened directly onto the **ARTisan** and cut. Remember that with this option, once the file is saved to the thumb drive, the design is locked in and cannot be edited.

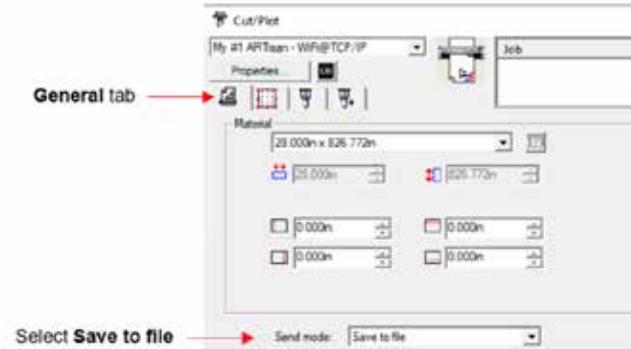
Once your file is ready to cut in LXi, insert a USB flash drive into the design station computer.

Go to **File>Cut/Plot** or click the **Cut/Plot** icon. A window will open and you will need to select the location of the LXi Production Manager in relation to your design station computer:



Click on **OK** and LXI Production Manager will open.

The **Cut/Plot** window will also have opened. On the **General** tab, select **SAVE to FILE** from the **Send mode** drop-down menu:



When you have made any necessary changes to the file size, copies, rotation, etc., click the **Send** button at the bottom right of the **Cut/Plot** window.

A window will open prompting you to select the desired location to save the .PLT file. Browse to the installed flash drive and save the file after entering a new name. Go to [Section 1.9.8](#).

NOTE: if you will continually be using the USB Flash Drive as your method of sending files to the ARTisan:

- Change the **Port** connection by right clicking on the ARTisan in the Production Manager list, and selecting **Change Port**.
- In the **Change Port** window, select **FILE** and then complete other options, as preferred:



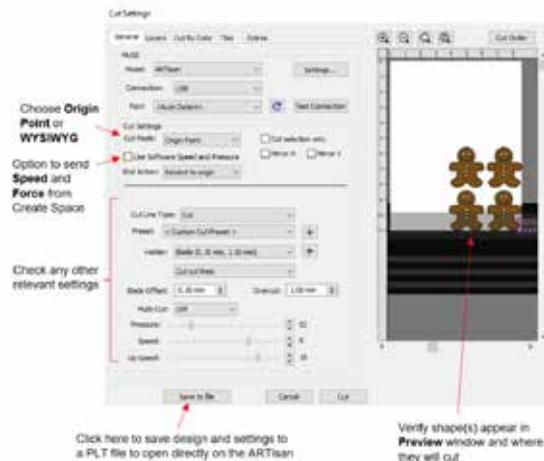
1.9.7 USB Flash Drive Setup in Create Space

If you are new to Create Space, follow the first few steps in [Section 1.9.2](#) to add the ARTisan to Create Space.

Using the **UDISK** (USB thumb drive) option involves saving a .PLT file containing the cut design and some or all of the cut settings. This file can then be opened directly onto the ARTisan and cut. Remember that with this option, once the file is saved to the thumb drive, the design is locked in and cannot be edited.

In the **Cut Settings** window, verify you see the design in the **Preview** and choose either **Origin Point** (move shapes to cut at the origin) or **WYSIWYG** mode (leave shapes in location on virtual mat in main window) depending on which you prefer.

Mark the box for Use **Software Speed and Pressure**, if you want those included in the file. Otherwise, leave the box unchecked and you can set those values on the ARTisan's control panel. The other cut settings including **Blade Offset**, **Overcut**, and **Multi-cut [Passes]** will always be included in the .PLT file:



Once your file is ready to cut, insert a USB flash drive into the computer. Click on **Save to File** at the bottom of the **Cut Settings** window. A new window opens where you can browse to find the USB flash drive and name the file.

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

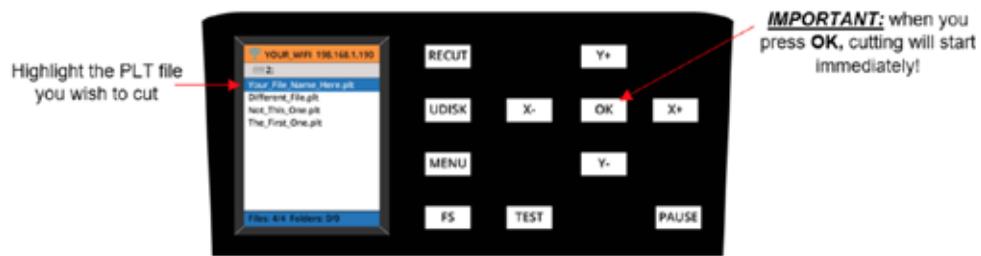
Insert the USB flash drive into your ARTisan cutter's USB flash drive port on the right cover.

On the control panel, press the **FS** button and change the **FORCE** and **SPEED** settings if you did not elect to send them within the .PLT file [refer to *Section 2.2.1*]. 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 ARTisan 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:



1.10 Maintenance

All ARTisan cutters are made with high-quality internal lubrication to protect all mechanical components. Therefore, there is no need to oil or lubricate any of the components, ever! Daily care consists of cleaning the platen and blade holder to prevent buildup of dust and material debris. Dusting the platen with a soft brush will get the job done perfectly. Debris inside the blade holder can be removed using a can of compressed air and a nozzle. Also, make sure the pinch rollers and grit rollers are kept clean and free of any stickiness.

2

Cutting

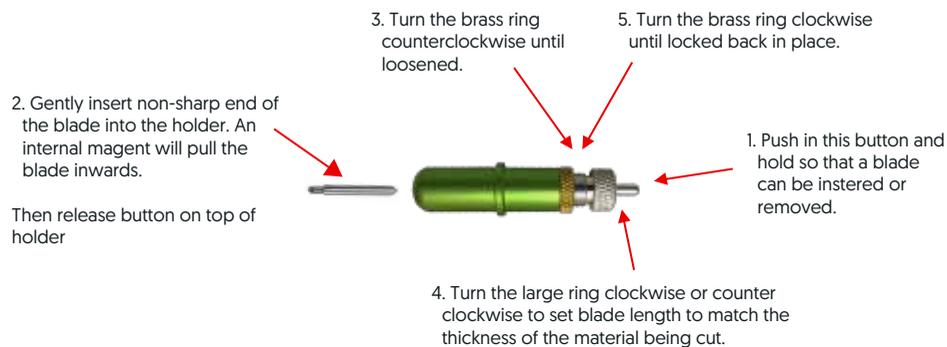
2.0 Cutting Overview

To be a successful owner of a vinyl cutter, you need to keep in mind a few factors:

- You're going to make mistakes. This is normal and part of the process of mastering a cutter.
- Read this chapter. It contains valuable information to help you understand how to load the blade, set the exposure, understand the effects of various cut settings, create presets, and set a new origin.
- Perform test cuts before cutting large projects. It prevents wasted material and preserves your valuable time.

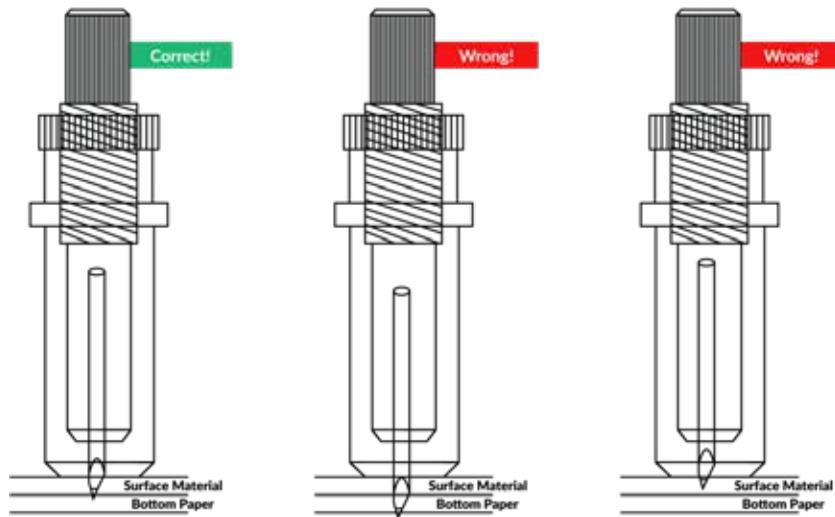
2.1 Proper Blade Installation

Before using the ARTisan advanced control panel to set the cutting speed and force, it is important to make sure the blade is installed properly in the blade holder. Remove the protective cap on the blade and follow these instructions:



The blade tip only needs to protrude far enough to cut through the face film and adhesive of adhesive-backed vinyl. This is a combined thickness of approximately 0.005" or less. The blade should not extend farther than ~ half the thickness of a credit card.

When properly installed, the tip of the blade is barely visible (as shown in the following diagram). Adjust the blade inside the holder by turning the knob clockwise to extend more of the blade and counterclockwise to retract it.



Perfect. The blade cuts through the vinyl, but not the release liner.

The blade is too far out. It's cutting through the release liner.

The blade isn't out far enough to cut through the vinyl.

Box Test: To make sure the blade is inserted properly, use the images in the prior figure as a guide. Once the blade is installed in the blade-holder, place a sheet of vinyl on a flat surface, and place the blade-holder against the vinyl. Try to hold it perfectly perpendicular to the surface as shown in the following photo. Next, move the blade-holder across the vinyl and draw a square. Set aside the blade-holder and try to weed the box.

- If you cannot remove the box from the rest of the vinyl, you may not have cut deeply enough. The blade may need to be adjusted so that the tip extends farther.
- If the vinyl lifts easily, but the release liner below is deeply scored or cut all the way through, the blade is cutting too deeply. Adjust it so that less of the tip is showing.
- If you can easily weed the box, but the release liner paper below is barely scored (or not scored at all), the blade is installed correctly in the blade-holder. You are now ready to install the blade-holder in the tool carriage and use the speed and force settings to optimize cut quality and efficiency.



2.2 Cut Settings

Now that you have inserted the blade properly in the blade holder, you can use the ARTisan's control panel and **Test** function to expertly manage the speed and force of the cutter. Cutting vinyl (and other media) successfully requires managing the amount of force you apply to the material and the speed at which the tool carriage moves across the platen.

2.2.1 Force and Speed

Before presenting the **Force** and **Speed guidelines**, note that a table of suggested settings for various SignWarehouse materials is available in *Appendix A*.

Force Guidelines: There are different levels of force required for various kinds of self-adhesive vinyl and heat transfer vinyl. Generally speaking, thicker or coarser materials such as reflective vinyl or glitter-flake HTV require more force than standard 3 mil sign vinyl.

The recommended or optimal force varies for different materials. The ideal force setting may even change for different colors. White vinyl sometimes requires more cutting force than other colors, due to the density of the pigment. It's always a good idea to perform a test cut before proceeding. This can be done using the **TEST** button on the control panel.

Speed Guidelines: In commercial signs and graphics, the faster you get a job done, the better. Time is money and speed saves time. So, it's tempting to run your cutter at top speed all the time, but this is not always the best approach.

Think of the cutter making vinyl graphics as if you were drawing, holding a fountain pen, or cutting with a hand-held X-Acto knife. If you were cutting or drawing a large square, you could go very quickly. If, however, you were cutting an intricate image, you might want to slow down and make sure you got all the curves and corners right.

The same holds true for vinyl cutters. You can cut large simple graphics at maximum speed. Cutting small, intricately detailed graphics requires more care and should be done at lower cutting speeds.

Just as you would do manually, if you're cutting something thick or tough, you would slow down to make sure you're cutting with enough force. Likewise, when using your ARTisan, cut thicker or tougher films on a lower speed setting to ensure good cut quality.

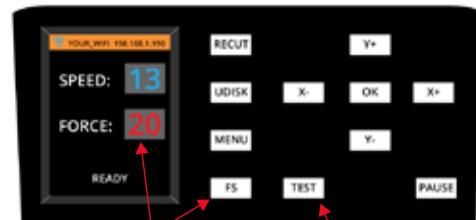
Changing Speed and Force: To change the speed and force settings on your ARTisan:

From the **Main Screen**, press the **FS** button the current **SPEED** and **FORCE** settings will be highlighted:

In this mode, you can now use the **X+**, **X-** buttons to change the **SPEED** and use the **Y+**, **Y-** buttons to change the **FORCE**. Note that you can hold down a button to make faster changes.

The **SPEED** displayed is on a scale from 1 to 13:

- The settings from 1 through 4 are the slow speeds and should be used when cutting dense difficult materials.
- 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.



Press FS to highlight
SPEED and FORCE

Press TEST to cut a
small square

X-/X+: change SPEED
Y-/Y+: change FORCE
OK return to normal mode

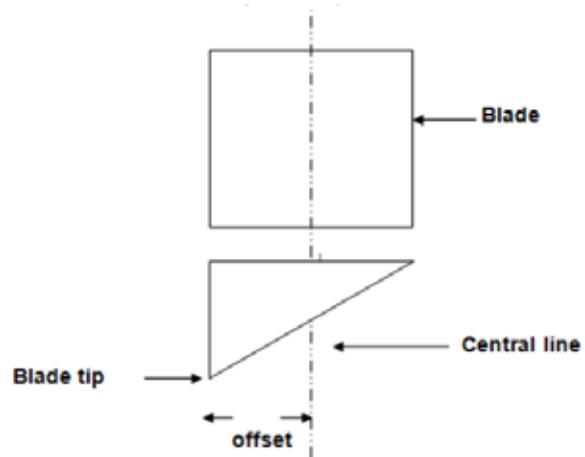
- The settings from 9 through 13 are the fast speeds and you may find that some materials will cut well at the faster speeds, especially if the shapes are larger and/or simpler.

Force is displayed on a scale from 1 to 160 where 160 represents the maximum of 2000g.

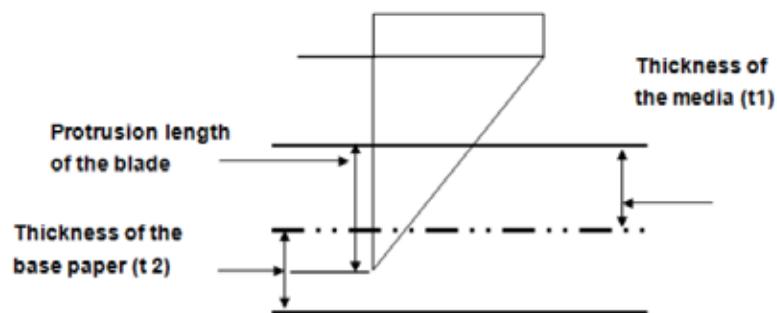
Once you have set the desired speed and force, load some vinyl and press the TEST button. Weed the pattern to determine whether the applied force is sufficient to cut through the top layer and adhesive, but not so much that it cuts through or deeply scores the release liner.

2.2.2 Blade Offset

Blade Offset is the distance that the blade tip is displaced from the centerline of the blade:

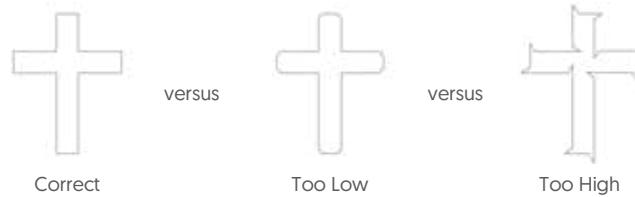


Protrusion Length of the Blade:



Length of Protrusion = $t_1 + (t_2 \div 2)$. For convenience, you may set it at about 0.3 mm – 0.5 mm beyond the blade holder tip.

Offset Adjustment: If you are cutting rectangular paths and find that paths which should have 90° angles are instead rounded, the **Blade Offset** is too low. If the angles are sharp but distorted, the offset value is too high:



In either case, you will need to adjust the **Blade Offset** value in LXi Production Manager (see *Section 2.4*) or in Create Space (see *Section 2.5*). These are the base settings for each type of ARTisan blade. The recommended **Blade Offset** is 0.30 mm [or 0.01 in] for the ARTisan blades.

2.2.3 Overcut

If your test cut has gaps in the paths or if the corners were not cut precisely, you may need to adjust the **Overcut** setting. This can be done on the **Default Job Properties** tab in the LXi Production Manager (see *Section 2.4*) or in the **Cut Settings** window in Create Space (see *Section 2.5*).

2.3 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.

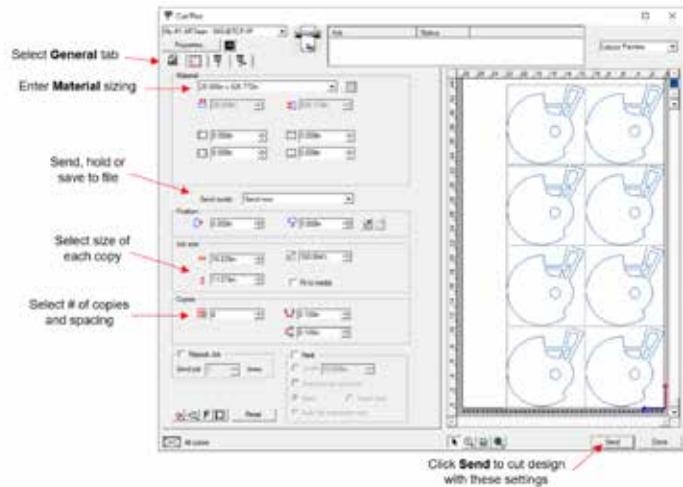
Once you have positioned the blade in a specific point over the media (typically close to the bottom right corner of the material), your origin is defined and you do not need to press anything before cutting.

2.4 Cutting from Vinyl Express LXi 19 to the ARTisan

When you are ready to cut, click the **Cut/Plot** icon to launch the Production Manager and open the following **Cut/Plot** window:

For a simple cut you only need to address the following on the **General** tab:

- Make sure the correct cutter is selected at the top of the **Cut/Plot** window.
- Verify the **Material** sizing is correct. If not, you can click on **Properties**, enter new dimensions and they will appear in the drop-down menu for **Material**.
- Create an array of repeats and change their sizing, as needed.
- Check the **Preview** to make sure it seems correct.
- Make sure **Send mode** is set to **Send now** if you are cutting directly to the ARTisan immediately.



While there are quite a number of other cutting features you may need for your applications, take note of several common ones:

- To change the **Blade Offset** covered in *Section 2.2.2*, click on **Properties** and select the **Cut** tab . Enable the setting called **Knife Offset** and enter a new setting, using inches as the units.
- To the right of the **General** tab is the **Options** tab , where you can set **Passes** if your material cuts better with more than pass.
- Also to the right of the **General** tab is the **Advanced** tab , where you can modify the **Overcut** setting covered in *Section 2.2.3*.

When you are ready to send the project to the ARTisan, click on **Send**.

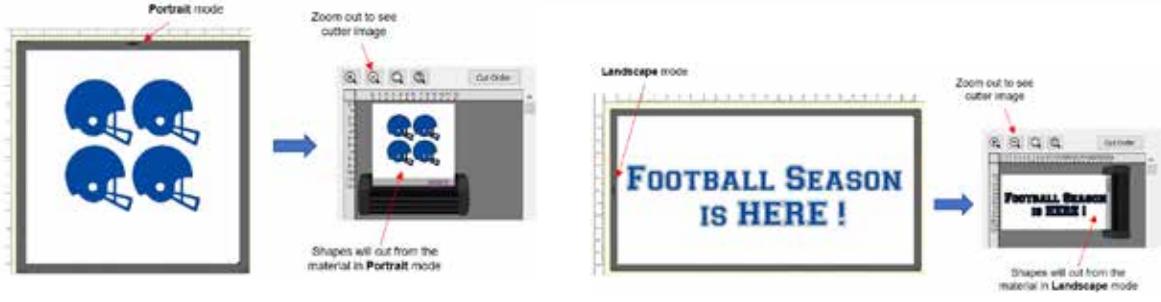
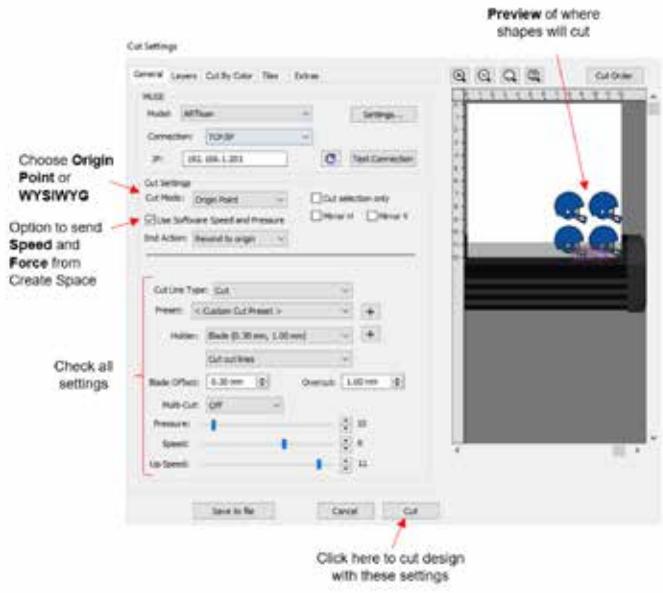
2.5 Cutting from Create Space to the ARTisan

When you are ready to cut, click on the **Cutter** icon to open the **Cut Settings** window:

Cut Mode controls where shapes will cut on the material. Typically, you will choose **Origin Point** to be more efficient with material. Shapes will be aligned and cut next to the origin you set on the material. If the **Cut Mode** is set to **WYSIWYG**, shapes will cut based on their placement in the document [mat] area as shown in screenshots which follow.

Use **Software Speed** and **Pressure**: Enabling this option will use the **Pressure** and **Speed** settings in Create Space, thus overriding those set on the ARTisan's control panel.

Note that when designing in Create Space, you can use either **Portrait** mode (typically used with the included cutting mat) or **Landscape** mode (typically used for longer projects). These are set on the **Document Panel** to the right, along with setting up your document area under **Mat Size**. Keep in mind that the triangle (arrow) on the edge of the on screen can be used to indicate where your shapes will cut relative to the direction the material is fed into the ARTisan. You can also then verify, based on the preview in the **Cut Settings** window where the shapes will cut relative to the ARTisan itself:



The **Cut Settings** window provides other functions, such as **Cut Order**, **Cut by Color**, **Layers** [Cut Settings by Layer], **Mirroring**, and more.

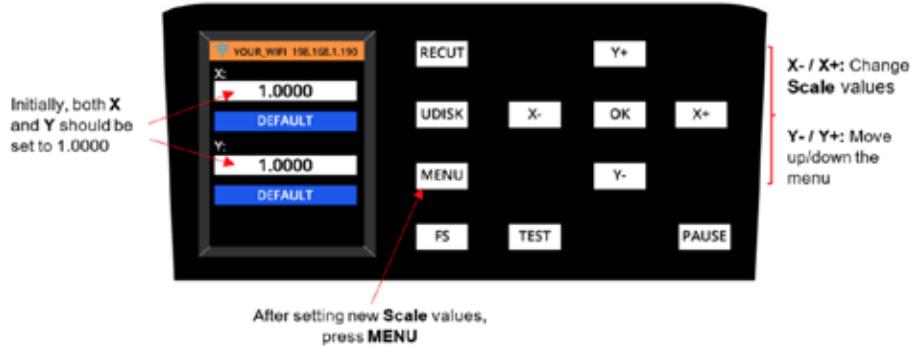
When you are ready to send the project to the ARTisan, click on **Cut**.

2.6 Resolution/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 ARTisan cutter.

In your design software, add a square and size it to 10" x 10" or, if using metric units, 250 mm x 250 mm.

On the ARTisan 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:



Using the test pen and a large sheet of paper, draw the square, noting which side was drawn left-to-right (which is the X side) and which side was drawing front to back (which is the Y side), as you face the ARTisan head on.

To calculate the **Scale** factors divide the *design dimension* by the *actual drawn dimension* times the current **Scale** factor. Thus, if you draw a 10" square and it measures ~10 1/32" (left-to-right) or if you draw a 250 mm square and it measures ~ 250.8 mm (left-to-right), then:

- **X Scale** = $10" \div 10 \frac{1}{32}" \times 1 = 10" \div 10.03" \times 1 = 0.997$
- Or, in metric, **X Scale** = $250 \text{ mm} \div 250.8 \text{ mm} \times 1 = 0.997$

Repeat for **Y Scale**. In this example, assume the Y side drew smaller than 10" and the calculated **Y Scale** is 1.002.

Return to the **Scale** screen and enter the values using the + and – 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

Troubleshooting FAQ

Having trouble? Check out these common questions & answers!

Question: What's the smallest character I can cut?

Answer: The ARTisan cutters use micro-stepper motors which have mechanical gears to move the grit roller and cutting head. The mechanical drive limits the precision with which extremely small characters can be cut. Letters smaller than .05" will be distorted. A 60° blade may be required for accurately cutting small text. When cutting graphics this small, the speed setting on your cutter should be reduced.

Question: Why is the cut quality inconsistent?

Answer: Inconsistent cut quality is often a function of the speed setting. You can adjust the speed across a wide range up to 24 inches per second. High speed is appropriate for large simple shapes and letters. But for small fonts and complex shapes, a slower cutting speed will produce better quality.

Question: Why doesn't the vinyl track correctly on long cut jobs?

Answer: Poor tracking is typically caused by the vinyl being incorrectly loaded into your cutter. Whenever possible, position the pinch rollers as close as possible to the edges of the vinyl. Allow some margin for error so that the vinyl doesn't 'walk' out from under one of the pinch rollers as the roll is fed through the cutter.

After loading the vinyl and setting the pinch rollers, use the arrow keys to feed the vinyl forward and backward a few feet to ensure the media is loaded properly and tracking straight. Feeding it forward and back will also place small grooves in the face film that aid in consistent tracking. If the vinyl alignment skews consistently to one side during cutting or media feed, there may be uneven pressure from the pinch rollers. Check to make sure both, or all pinch roller wheels are in the down position. If all wheels are down and the vinyl still consistently skews to one side, you may need to replace one of the pinch rollers.

Question: Why are there rough edges on cut graphics?

- Answer:
1. The knife blade may be protruding too far from the blade holder. Refer to *Section 2.1* and adjust the blade so that you're not cutting too deeply into or through the release liner.
 2. Your blade is damaged or worn out and needs to be replaced.

Question: My LCD display doesn't seem to turn on - or I see a black row of blocks in my LCD screen

Answer: 1. If the LCD is blank, check to make sure your cutter is plugged into a working outlet and turned on.

2. If you're seeing black blocks on the LCD screen, make sure you're getting adequate voltage to your cutter (your outlet may be lower voltage). If you're plugged into a 110v outlet, and the problem persists, contact SIGNWarehouse Product support.

Question: Why are some of the letters cut incompletely?

Answer: 1. Make sure the blade holder is correctly installed in the tool carriage.

2. Check the blade tip to make sure it isn't damaged.

3. The blade holder may be worn out. As blade holders age, their control of the blade's movement is degraded. The first sign of this is often incompletely cut shapes, such as rectangles with uncut corners.

4. Reinstall the software and check with your IT support staff to ensure there is no interference between your computer and your cutter. Anti-virus software can sometimes cause interference in the communication to your vinyl cutter, for instance.

5. If the problem persists, contact SIGNWarehouse Product support.

Question: Why does my cutter cut more deeply in one part of the vinyl than another?

Answer: There is a Teflon strip that covers the width of your cutter under the path of the cutting head along the X axis (left to right). When your vinyl cutter is properly set up and cutting vinyl at the proper depth, the blade doesn't touch this strip. If the blade is incorrectly installed, or if your cutter is allowed to cut beyond the vinyl, the Teflon strip may become scratched. If this happens frequently, the strip will become damaged causing that area of the strip to push upward against the bottom of the vinyl resulting in inconsistent depth across the platen. Contact SIGNWarehouse and purchase a replacement for the Teflon strip.

Question: Why isn't my Muse responding to jobs sent from the software?

Answer: 1. This is almost always caused by selecting the wrong port in the setup process. Refer to *Section 1.9* and make sure your cutter is in the correct mode for plotting by USB or Wi-Fi.

2. If the settings are correct, but your cutter isn't responding, open the LXi Production Manager, change the USB port or connection method, and send a test cut. Repeat until you find the correct USB port for the computer. For more detailed instructions, please refer to [this article from the SIGNWarehouse Tech Support Blog](#).

3. Check the settings in your LXi Production Manager and make sure the send mode window is set to **Send Now** (Refer to *Section 2.4*). If the setting is **File** or **Hold in List**, the data won't be sent from your computer to the vinyl cutter. If it is set to **Hold in List**, you will find the jobs holding in the cutter queue. Click on the job in the queue and use the **File/Cut Plot** command or click the **Send** icon.



Question: Why can't I weed the graphics after cutting?

Answer: Most likely, you haven't cut the vinyl deeply enough to cut through the face film and adhesive. To fix this, adjust the pressure setting and perform a test cut. This can be done from the control panel or from the LXi Production Manager. Weed the test pattern to make sure the vinyl's face film and adhesive have been cut, but that the release liner isn't scored too deeply. Adjust the pressure setting as needed. Then proceed with your vinyl graphics.

Question: What kind of maintenance does my ARTisan cutter need?

Answer: All ARTisan plotters are made with high-quality internal lubrication to protect all mechanical components. Therefore, there is no need to oil or lubricate any of the components, ever! Daily care consists of cleaning the platen and blade holder to prevent buildup of dust and vinyl debris. Dusting the platen with a soft brush will get the job done perfectly. Vinyl debris in the blade holder can be removed using a can of compressed air and a nozzle.

Appendix A: Suggest Cut Settings for the MUSE ARTisan

VINYL TYPE		FORCE*	BLADE	SPEED†
Calendared Vinyls				
	EnduraGLOSS	17	45°	10
	EnduraMATTE	17	45°	10
	ORACAL 631	17	45°	10
	ORACAL 641	17	45°	10
	ORACAL 651	17	45°	8
Holographic Vinyls				
	Schein Chrome PPP	22	45°	7
	Schein Mosaic	22	45°	7
	Schein Carbon Fiber	22	45°	7
Cast Vinyl				
	ORACAL 751	17	45°	9
	ORACAL 851	17	45°	9
	ORACAL 951	17	45°	9
Reflective Films				
	EnduraLITE 48000	27	60°	6
	EnduraLITE 8100	27	60°	6
	ORALITE 5300	27	60°	6
	ORALITE 5600	27	60°	6
	ORALITE 5700	27	60°	6
	ORALITE 5800	27	60°	6
Paint Stencil Film				
	ORAMASK 813	19	45°	9
	ORAMASK 810S	18	45°	9
Heat Transfer Film				
	Siser EasyWeed	20	45°	10
	Chemica HotMark	22	45°	9
	Logical Color WarmPEEL CP	22	45°	9
	Glitter HTV	24	60°	8

* These are recommended starting points. Required force may depend on condition of the blade and variations in film density. Always perform a test cut.

† Speed may vary according to complexity of the design.