



## **OPERATING INSTRUCTIONS for the **ESC60** Stencil Cutter**

**Please write down the following for your records:**

**Serial No.** \_\_\_\_\_

**Date Purchased** \_\_\_\_\_

**Stencil Material used** \_\_\_\_\_

**Blade used** \_\_\_\_\_

**Blade Offset** \_\_\_\_\_

**Blade OverCut** \_\_\_\_\_

**Blade Force** \_\_\_\_\_

**Machine Speed** \_\_\_\_\_

**Voucher No.** \_\_\_\_\_

**Tech Support PH # 618-343-1066**

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926 McDonough Lake Rd  
Collinsville, IL 62234  
618-343-1006**

**Congratulations on the purchase of your new stencil cutter!  
Please read through this operating manual carefully to easily  
integrate your unit into your production environment.**

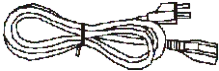







## Safety measures

Please read the information and safety measures carefully prior to initial operation of the unit!

- Do not place any magnetic objects in the vicinity of the cutting head; otherwise uniform contact pressure is not ensured.
- Do not remove the connection cable from the computer while a cut job is in progress.
- Release the pressure on the pressure rollers when not in use by moving the pressure lever up.
- Do not reach into the unit when it is connected to an electricity supply
- Never open the casing and do not make any modifications to the unit yourself.
- Ensure that neither liquids nor metal objects are put inside the stencil cutter.
- Ensure that the wall socket used is grounded and protected with a ground fault switch.
- Ensure that the connected voltage (110V) does not deviate by more than  $\pm 10\%$ . Otherwise install a voltage stabilizer.
- Pull the power plug if the unit will not be in use for a longer period of time.
- Never reach into the unit in the vicinity of the blade holder during the cutting operation!
- Discontinue any printing jobs in progress before readjusting the blade holder!
- Always ensure that the stencil cutter is out of reach of children during operation and never leave the unit or individual parts of it switched on without supervision.
- Do not touch the tip of the sliding blade to avoid injury.
- Always place the unit on a stable base to prevent it from falling down.
- Do not operate the unit during thunderstorms; it can be damaged or destroyed by lightning.

## Items included

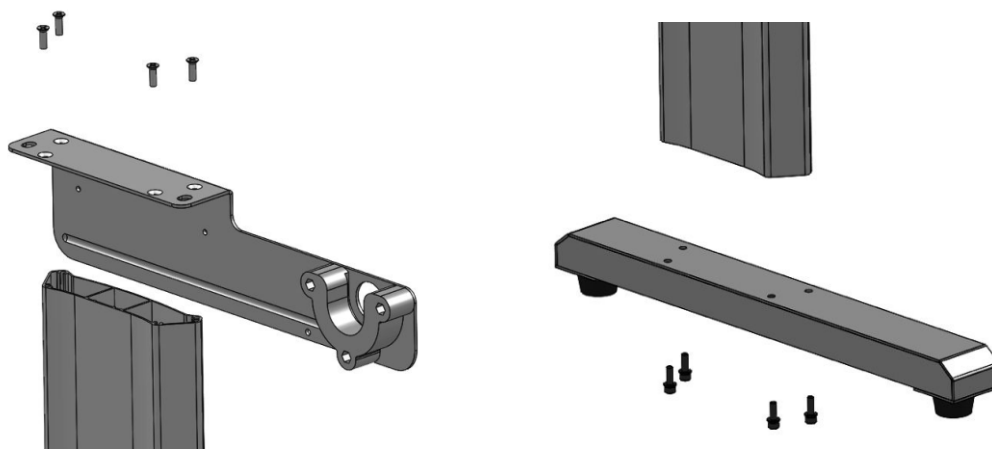
Before starting work, please check whether the following items are all present:

Article	Quantity	
Stencil cutter	1	
Power cable	1	
USB connection cable	1	
Blade holder	1	
Pen holder	1	
60° Blades	2	
Pen head	1	
DrawCut LITE license certificate	1	
Floor stand with roll holder	1	

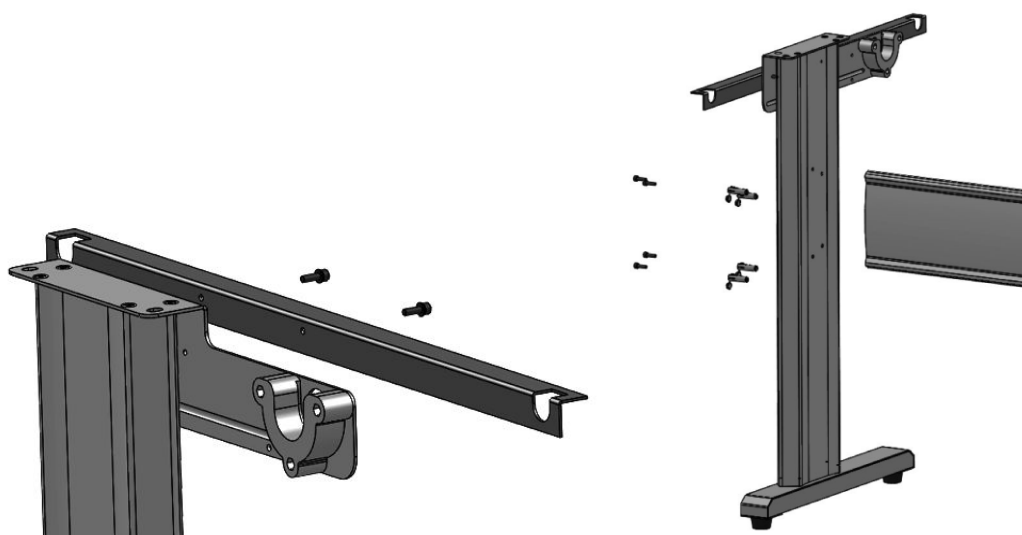
## Assembly of the floor stand

Your **ESC60** stencil cutter's floor stand is easy to assemble using the supplied parts. Simply follow these steps:

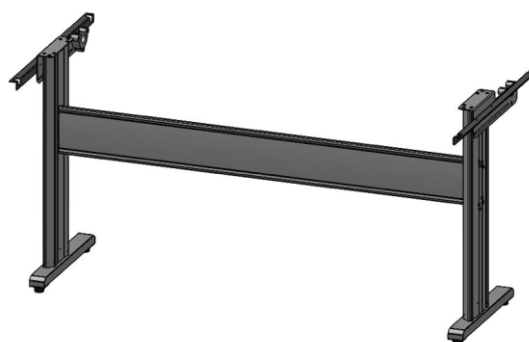
### Step 1 and 2:



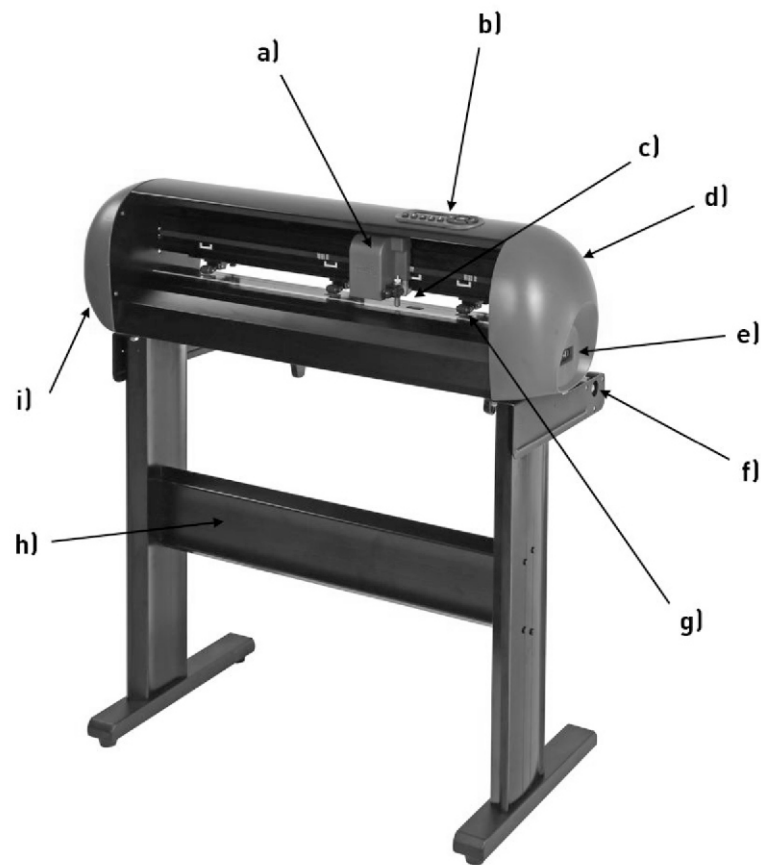
### Step 3 and 4:



**Done!**



## Device parts and their function



- a) Cutting head
- b) Control panel
- c) Blade holder
- d) Pressure lever for all pinch rollers (w/out fig.)
- e) USB interface
- f) Roll mount
- g) Pinch rollers
- h) Floor stand
- i) Power supply and power switch (w/out fig.)

## Control panel



## Initial operation of machine and software

**Caution!** Please note that DrawCut LITE or PRO must be installed first to allow for a smooth installation and complete configuration. **BEFORE INSTALLING THE DrawCut LITE SOFTWARE PLEASE INSTALL THE FONT CD INTO YOUR WINDOWS FONT FOLDER.**

### Installation DrawCut LITE

Our **ESC60** stencil cutters are delivered with the cutting software DrawCut LITE. This software must be activated over the internet. You do not necessarily need internet access on the computer, on which DrawCut LITE will be installed. The activation can also be done through another computer.

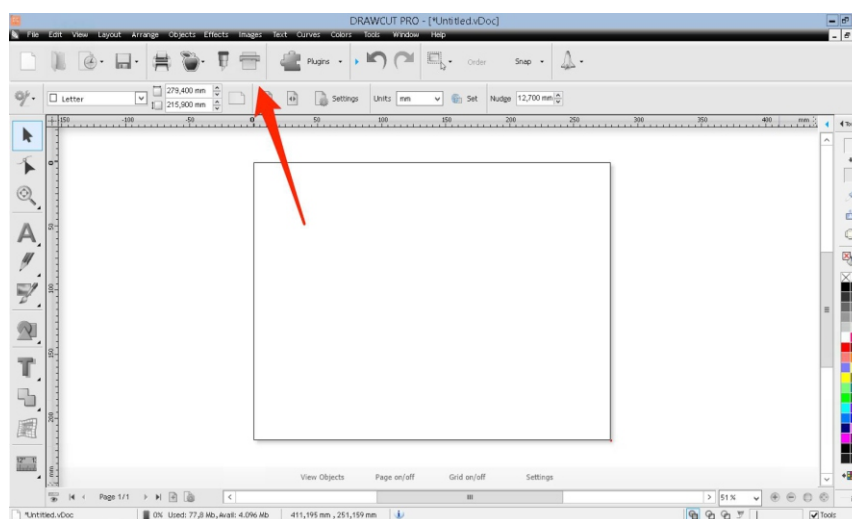
In order to control your stencil cutter via your computer, install the software as described below:

- Disable the Windows Firewall and your antivirus software for the time of installation.
- Download the current version of DrawCut LITE at <http://www.drawcut.com/#downloads> and follow the installation wizard.
- Find your voucher number on the printout that was delivered with your StencilMAX stencil cutter. Enter it when you are prompted to do so.
- Now you can use DrawCut LITE.

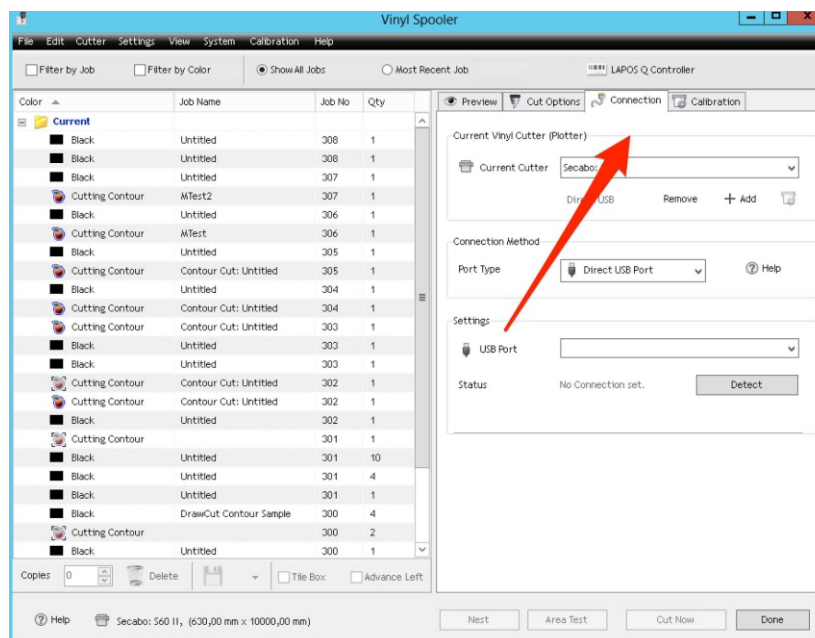
### Installation of your ESC60 Stencil Cutter in DrawCut

Please keep in mind that your stencil cutter can only be operated under Windows XP, Windows Vista, Windows 7, Windows 8, Windows 8.1 and Windows 10. Operation with an older version of version of Windows is not possible.

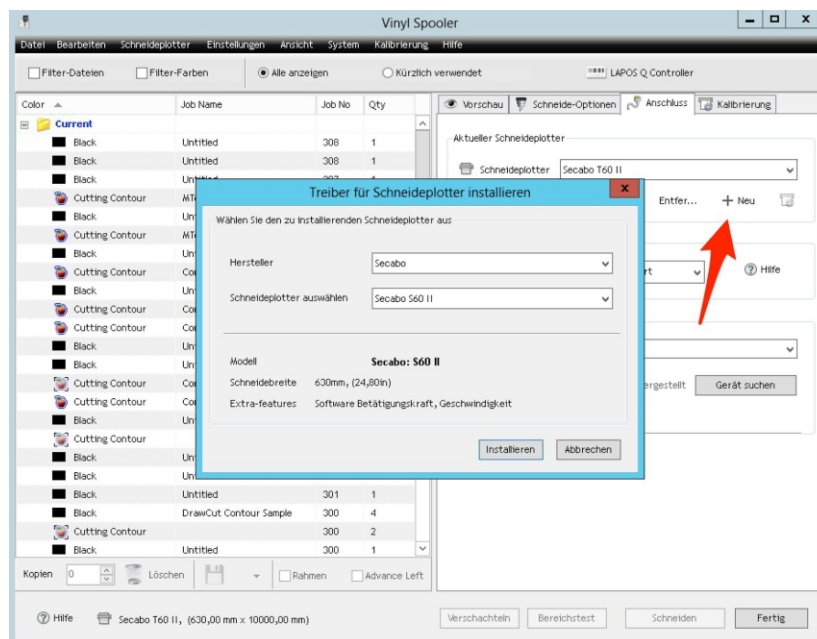
- First, make sure that your PC is connected to the Internet.
- Connect the stencil cutter to your computer using the supplied USB cable.
- Switch on the device.
- Your stencil cutter will now be detected. Windows will search for the appropriate drivers and automatically install them. This can take some time. Afterwards, the device will be ready for operation.
- Start DrawCut.
- Next, open the "Vinyl Spooler" in Drawcut.



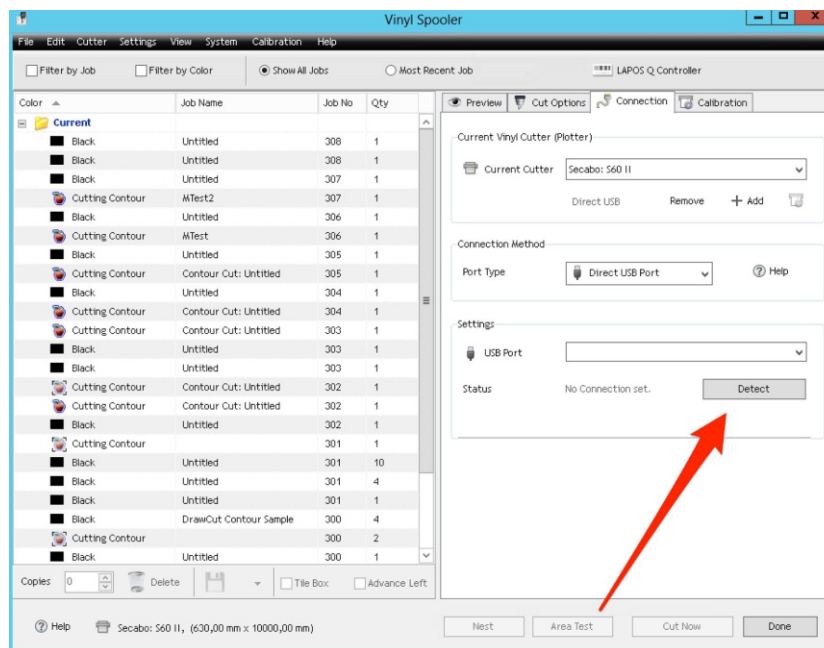
- Now click on the "Connections" tab.



- Next, add your **ESC60** cutter by pressing the "Add" button, select **S60 II** and click "Install".



- Click on the button labeled "Search device" and follow the instructions in the installation wizard. Confirm the message regarding successful installation by simply clicking on the button labeled "Done". Now you can control your **ESC60** stencil cutter using DrawCut.



## Initial operation of the device

Make sure that there is sufficient space for the stencil material in front of and behind the device. The cutter may only be operated in a clean and dry environment.

- Connect the stencil cutter to a 110 V socket using the supplied power cable.
- Now switch on the cutter.



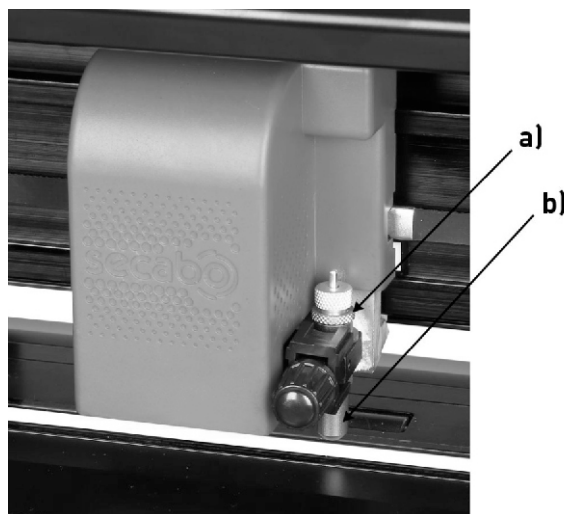
## Installing and adjusting the blade

- Take the supplied cutting blade and place it in the blade holder in such a way, that the sharp side extends at the front.
- Now set the cutting depth by turning the screw at the upper end of the blade holder.
- Initially, the depth is set correctly if you can carefully move your fingertip across the blade and feel only a light scratching. Since the depth adjustment for the blade depends on the material, it may be necessary to adjust it later.
- Secure the blade setting by tightening the gold lock nut.
- Press the pin on the rear end of the blade holder to remove and replace the blade at any time. Caution risk of injury!

The various material thicknesses require different blade settings or even special blades; it may therefore be necessary to repeat the adjustment described above.

## Inserting the blade holder

- First, sufficiently loosen the clamping screw for the blade holder on the cutting head.
- Next, press down the blade holder from above into the hole on the right side until there is contact and pull the lock nut tight. In doing so, please ensure that the blade holder is also secured correctly from above by means of the fixture provided for this purpose.



- a) Clamp
- b) Blade holder

## Inserting the stencil material

- Always insert the material into the device from the rear.
- Pull the material up to the cutting bar to correctly set the zero point.
- If inserting a roll instead of a single sheet, you can use the supplied holder integrated into the base to ensure the film is rolled off cleanly.

- When inserting, please ensure that the material is inserted straight.  
Inserting the stencil material even a few millimeters off angle can result in significant traveling of the material when processing large cut jobs.
- You may insert the material into the device at any point, provided the pressure roller is in the area of the black and white rectangles on the crossbar.
- Fixate both pressure rollers by flipping the clamping lever on the rear right side of the device.
- The contact pressure can be changed by tensioning the springs on the individual pinch rollers, should this be necessary.

## Cutting test

- Execute the cutting test by clicking the „Test“ button. The stencil cutter will cut a triangle with a rectangular border into the inserted material at the currently saved zero point. Afterwards, the stencil cutter will move the material up by a fraction, so that you can easily check the test cut.



- You can check the adjustment of the blade holder as well as the contact pressure with this cutting test. The inserted material should be cut cleanly and straight during the cutting test; the carrier material should not be damaged.
- After reviewing the test cut, press "OK" to move the film back to the zero point.



- If the carrier material (backing) has been cut through, either the contact pressure is set too high or the blade or blade holder are set incorrectly. Change these settings and perform the cutting test again.
- Also readjust if the material was cut imprecisely or to an insufficient depth.

## The first cut job

- Start the cutting software DrawCut LITE.
- Create a text stencil using the text tool and click on the knife holder icon in the menu bar above.
- The menu "Send to cutting plotter" appears, click on "Cut" in the lower right section of the window.
- Now, the "Vinyl Spooler" opens and displays a preview of the cut job on the right side. Now click on "Cut" and confirm the question with "Yes".
- Start the cutting process!

- The plot can be stopped with the "Pause" key at any time, for example allowing you to adjust knife settings while still in the cut job.



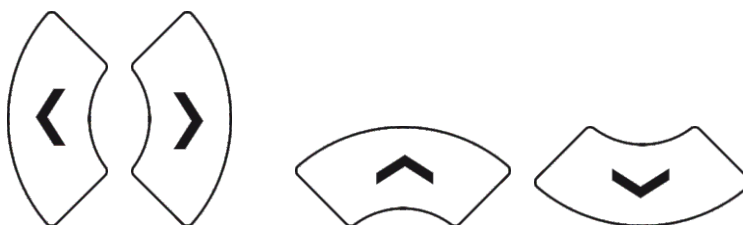
- You can use the "OK" key to continue to run the cut job.



## Settings and operation

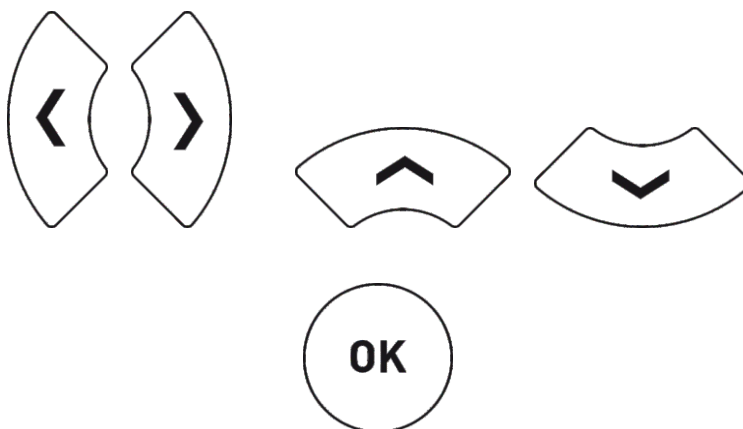
### Moving the cutting head

Pressing the arrow keys lets you move the cutting head left or right, as well as move the material forwards or backwards. The corresponding X and Y coordinates are shown on the display.



### Setting the zero point

To set the correct starting point for cutting, move the cutting head and material using the arrow keys, so that the knife is located in the front right corner of the material. Now confirm this zero point by pressing "OK".



## Adjust speed and contact pressure

You can make the following changes by pressing the corresponding buttons: The "+" function is located at the upper end of the button, while the "-" function is at the lower end.

### Increase and reduce speed



### Increase and reduce contact pressure



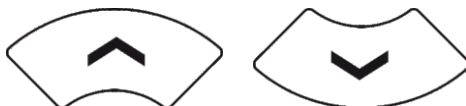
The cutting speed and contact pressure cannot be changed while a plotting job is in progress.

## Other settings

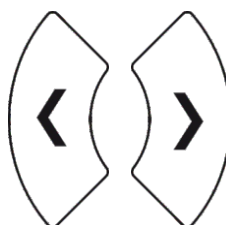
The configuration menu is opened by pressing and holding the "Set" button for 5 seconds.



Use the up and down arrow keys to cycle through the menu options.



Left and right arrow keys allow you to adjust the relevant values.



Press the "OK" button to leave the configuration menu at any time.



These settings are queried in sequence:

- Baud rate configurable to 38400, 57600, or 115200, depending on the value configured for the interface on the computer only when connecting via serial port.
- XP and YP in the second and third menu point, you can calibrate the stencil cutter correctly. Correction may be required here due to wear to the mechanical parts. The X and Y scaling of the data can be changed by changing the XP and YP values. If, for example, an object for which a length of 100 cm was entered on the computer is cut on the stencil cutter to a length of only 98cm, it is necessary to correct the corresponding scaling value on the plotter. Otherwise, these values should not be changed.
- Reset settings here you can restore the stencil cutter's factory settings. To do so, the right arrow key must be held for 3 seconds.

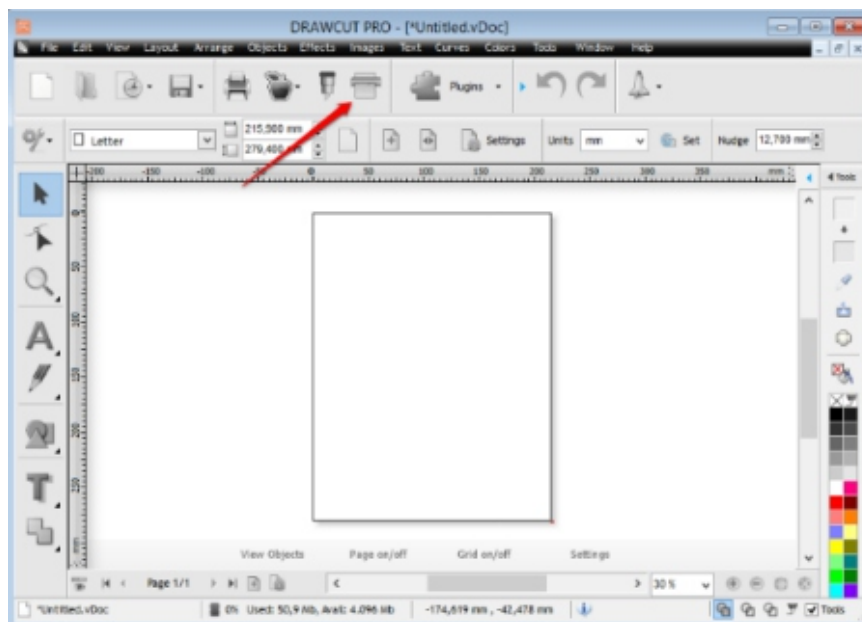


- Firmware here you can view the firmware version installed on the cutter.

## Calibration:

Before the first use, the cutter requires an initial calibration to determine the correct blade offset. DrawCut provides two procedures to achieve this, one fast and one detailed option.

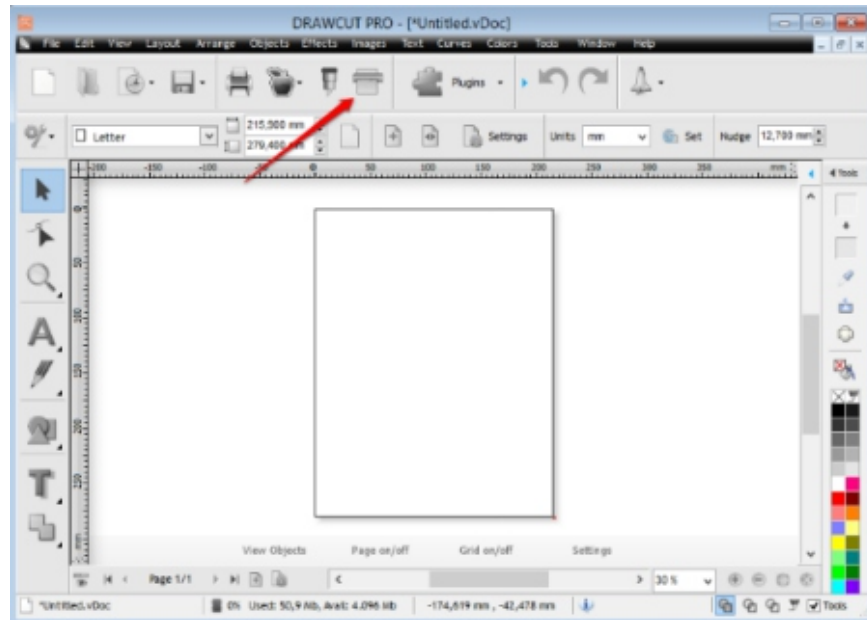
- The first step is to open the "Vinyl Spooler".



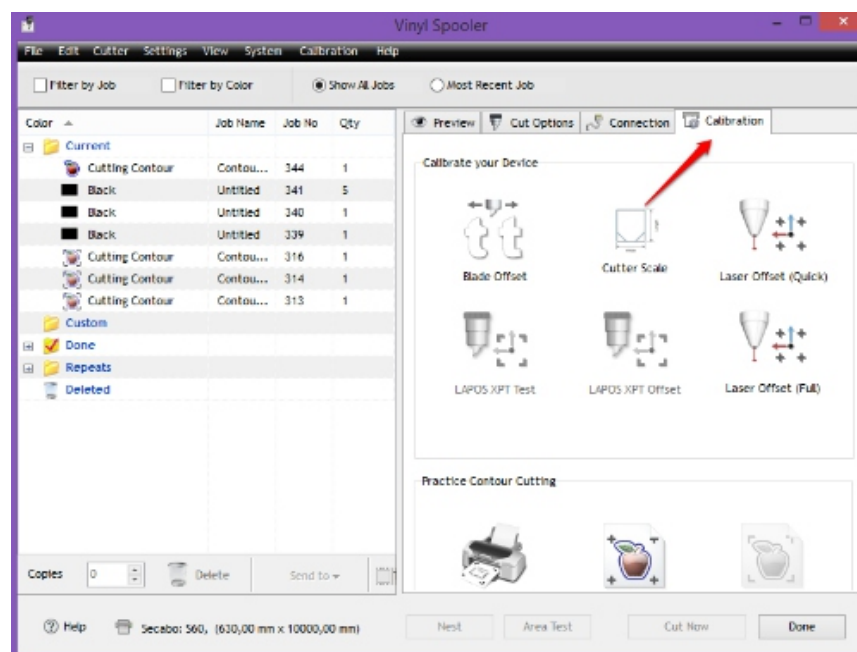
## Calibration:

If you need to calibrate your machine to a material other than Express Cut or Oilboard. DrawCut provides two procedures to achieve this, one fast and one detailed option.

- The first step is to open the "Vinyl Spooler".



- Click on the "Calibration" tab. Choose the fast or the detailed option and follow the instructions of the respective Calibration Wizard.



Once the calibration is complete, you can start cutting.

- Write down your blade offset!

## Cutting Blades

The blades are sensitive, sharp and dangerous precision tools.

- Keep the blade out of the reach of children!
- To avoid personal injury, caution must be taken in handling the blades.

Handle the cutting blades carefully and always store them with the protection cap when not in use. Should the tip of a blade hit hard materials such as glass or stone, it can cause tiny fractures of the tip of the blade, making the blade unusable.

Please consider the following instructions to prevent unnecessary wear and tear of your drag knives and to achieve a long life of these products instead.

- In any case, avoid cuts into the carrier of the stencil material. The deeper you cut into the material, the higher will be the wear and tear of the blade.
- Adjust the cutting depth of the blade so that the material is merely cut cleanly. If the blade protrudes any further, it reduces the durability of the blade and good cutting results can no longer be guaranteed.
- For thicker materials, use knives specially suited for it (e.g. flock knife for flock).
- Frayed edges after cutting indicates a dull blade. Replace worn blades immediately!

## Technical data

Model	ESC60
Type	Stencil cutter with servomotors
Max. Media width	28.3"
Max. Cutting width	24.8"
Connections	USB
Display	backlit, graphic LCD screen
Max. Speed	3.1ft/s
Max. Media thickness	0.04"
Contact pressure	50g - 750g
Mechanical Resolution	0.0005"
Repetition accuracy	< +/- 0.004"
Power supply	AC 90V 240V / 50Hz 60Hz
Environment	+41°F +95°F / 30% 70% relative humidity
Weight without packaging	33lb
Weight with packaging	55lb
Dimensions (W x H x D)	36 x 10 x 10in