

User Manual & Assembly Instructions



IMPORTANT SAFETY INSTRUCTIONS







Do not place any magnetic objects in the vicinity of the cutting head; otherwise uniform contact Force is not ensured.

Do not remove the connection cable to the computer while plotting is in progress.

Do not reach into the unit with your hands when the power is connected.

Never open the housing or attempt to modify the unit unless instructed to do so by a qualified technician.

Ensure that liquids and metal objects do not get into the 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.

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 vinyl 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.

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Thank you for purchasing the SC2 vinyl cutter. Please read this manual completely and keep it in a safe place for future reference.

For Accessories, Supplies, and replacement parts please visit our website at www.uscutter.com

Where to use and store the vinyl Cutter

Location, Location, Location! It's not just important for real estate. Where your vinyl cutter "lives" in your home or business is a vitally important element of your success.

- You need access to a 110 volt grounded electrical outlet. That's the standard household kind with three holes, not two. Be safe... don't plug your cutter into an already over-crowded powerstrip or system of extension cords.
- 2 Dust and dirt will limit the useful life of your cutter. If you use it in a dusty or dirty environment the cooling fans will suck in the dust and it will get inside the machine and gum up the works.
- Operate on a stable surface. A solid flat surface is needed for your vinyl cutter to do its best work. If it wobbles or vibrates during operation your cut is not going to be as sharp and clean as it could be.
- Access is important. The SC2 cutter is a large machine, but it doesn't belong in the corner during use. You'll need to access the front and back of the cutter to operate it and change the vinyl rolls.
- 5

There will be some noise when the cutter is in use. Take that into account when you locate your vinyl cutting headquarters.

6 Position the cutter near enough to your computer to be able to attach it via USB cable or 9-pin serial cable. Internet access will be necessary for downloading drivers and software.

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



If any parts seem to be missing from your package please contact support @1-888-975-2047

Assembling the stand

Before you begin:

Read the assembly instructions from beginning to end. Give yourself plenty of time. Gather the tools you'll need that aren't inluded in the box:

1. A Phillips head screwdriver.



Step 1.

Attach the feet (A) to the legs (F).





Attach the wheels (K). Simply screw them into the bottom of the stand feet(A)., two wheels for each foot. You can do this before or after attaching the foot to the leg.

Attach the foot to the leg with four #1 screws.

Notice there are more than four holes on the foot.

Line up the foot and the leg so that the four holes in the leg that look like this line up with the four holes on the foot.

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Which end of the leg do I attach the foot?

Good question. See those two holes that are further toward one end of the leg? That's where your cross piece is going to attach and hold the two legs together. Attach the foot to the other end.

Also, note the use of the tubular screw guide and how to place it in the leg holes when attaching the leg to the cross beam. If you cannot find your screw guide, you can use a large drinking straw or thick milkshake straw instead.



One side is rounded and the other has sharp corners? Which side should face out?

The rounded edge side should face out. If you look closely at the holes you will see that one side is biger than the other. The small holes will attach the cross piece and you'll screw them in through the larger hole.



Attach the foot to the leg with four #1 screws using the Phillips screwdriver. Repeat with the other leg and foot making sure the rounded edge faces out and the holes for the cross piece are close to the top.

Assembling the stand

Step 2.

Attach the cross beam (D) to the legs (F) with 8 #1 screws (4 for each leg).

This is where making use of a chair or bench to hold the cross piece in place while you attach the first leg will come in handy.

We've got the rounded edge and sharp edge situation again? Which way do I orient the crossbeam?

It actually doesn't matter, but most people consider placing the rounded edge facing the front more aesthetically pleasing.

Here you will need to use the tubular screw guide (L) to keep the #1 screws from dropping down the leg when you attach the cross beam to the leg.

Step 3.

Now let's mount the roller brackets (H) to the legs (F). They'll attach at the crosspiece and will create a place for the rollers to sit.

NOTE: If your roller brackets arrived in four pieces instead of two, simply attach the black plastic roller holders (I) to the metal brackets (H) with those extra six #3 screws (the smallest ones).

TIP: You can mount the black plastic roller holders with the twin slots either closer or further from the cutter depending on size of rolls you use most often. Just flip the roller holder and leave out the small screw from the center position.

Use 4 #2 screws (2 on each side) to attach the roller brackets to the stand legs. The metal brackets have a "lip" which the roller guide sits on. When you attach the bracket, make sure the lip faces inward so that the entire bracket is inside the span of the legs.







Step 4.

Attach the mounting brackets (E) to the top of the legs (F). This is where you will mount your SC2 Cutter.

Use 8 #1 screws (4 on each bracket) to attach the mounting brackets to the top of the legs. The brackets have a staircase-like shape. you will screw the lower "stair" to the stand leg and will attach your Cutter to the upper "stair" in a later step.

Some cutters will have an optional mounting strategy that allows attachment of the cutter via two thumbscrews that screw into the bottom of the cutter. The mounting bracket may be slighly different for these models.

Step 5.

Attach the front catchbasket bracket to the leg using 4 #2 screws (2 on each bracket).

Step 6.

Thread the catch basket poles through the catchbasket and position the catch basket in the front and back grooves of the basket brackets. Place roller bars in position. If roller bars seem too short, brackets in Step3 need to swap sides.

Step 7.

In order to mount the cutter to the mounting brackets (E) on the stand, you first need to remove the feet from your cutter. With your cutter sitting on the mounting bracket, re-attach the feet so that they secure the cutter to the stand.

Alternatively you can remove the feet and just use screws and washers to secure the cutter to the stand.



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Before you start cutting, you should familiarize yourself with the cutter along with its basic parts and functions.



CONTROL PANEL	Used to provide input directly to the cutter. Covered in detail in the "Control Panel" section of this manual.
CARRIAGE ARM	Holds the blade (or pen) carriage.
PINCH ROLLERS	Holds the media tightly to the feed roller below.
FEED ROLLERS	Advance the cutting material (under pinch rollers)
BLADE HOLDER	Holds the blade and allows changing blade depth
LEFT SIDE COVER	Contains the power cable port, power switch, and fuse cartridge for the cutter.
RIGHT SIDE COVER	Contains the USB and serial cable ports for the cutter.



Attach the power cord to the cutter and then plug in the unit and turn on the power.



If using the USB Cable to connect your cutter to a computer: **(USB is the recommeded connection method)**

In most cases, all needed PC drivers will be preloaded in VinylMaster. If you need to download and install drivers for the USB connection to work properly go to **www.uscuttersupport.com** and select the driver that supports your Windows version.



If using the Serial Cable to connect your cutter to a computer:

If you are using a Serial Cable to connect your cutter to a computer then no further setup is necessary. Simply connect one end of the cable to the cutter and the other end to a computer and setup is complete. If you have more than one serial connection on your computer or you are experiencing communication issues between your cutter and computer then you may wish to verify that the correct COM port is being used in your software setup, but for most users the COM port will be COM1.

NOTE: Only one connection method (USB or Serial) is needed. USB is recommended.

INSTALLING VINYL MASTER SOFTWARE (if purchased)

Your Vinyl Cutter may have optionally been bundled with **VinylMaster Cut** Windows compatible software. Software is download only (no CD).

Download **VinylMaster Cut** software at **www.uscutter.com/download** You will need the key code packaged with this cutter to activate the

software. You may need to download drivers to support your operating system. Drivers are available at http://support.uscutter.com

Training for VinylMaster is all done via short videos accessed through the software. To access the videos, click on the SUPPORT link in VinylMaster, then further on HELP TOPICS.



 Image: Contract of the softward of the softward

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KEY CODE

Installing Software



Setting up Media

Place the roll on top of the stand rollers.





Release the pinch rollers release levers.

Feed the vinyl underneath the pinch rollers (if working from a single sheet instead of a roll, the vinyl can also be feed from the front).



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Adjust the pinch rollers so there is one roller located on each side of the vinyl (and, on models with 3 or more rollers, one roller near the center). Avoid lowering a pinch roller to the gap between the two feed rollers.





Leave a gap of between $\frac{1}{2}$ "-1 $\frac{1}{2}$ " from the edge of the roller and the edge of the vinyl on both sides.

Engage the Pinch Rollers by pushing down on the Pinch Roller Release Levers.



If the cutter is not already on, turn it on now.





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The latest release of Vinyl Master Cut has a new installation wizard that may already have installed the correct cutter driver for you. If your cutter driver is already installed and functional via the wizard, you may use the above instructions whenever you wish to add a new cutter model.

Newer versions of Vinyl Master Cut also have extensive help menus and context sensitive videos that will help train you and help guide you through any software issues you may experience.

You can find additonal information about VinylMaster setup and configuration at: https://www.uscutter.com/VinylMaster-Support

Blade Set Up



TIPS FOR GETTING OPTIMAL RESULTS

• Use a short blade depth. You only need to extend the blade 1/2 the thickness of a credit card. New users tend to expose too much blade. The idea is to cut through only the top layer of the vinyl and to leave the backing layer with only minimal scratches. This allows you to weed the top layer off the backing easily. If corners or small detail do not cut all the way through, consider increasing the force before extending the blade depth. If you can feel cut lines on the backer underneatth the vinyl, blade depth should be reduced. You only need to extend the blade depth or use the 60 degree (blue tip) blade for thicker materials.

• Set a safe and reliable speed. A good starting value for speed is 300. Once you have accumulated experience with the material you are cutting and production time becomes a factor, you can look to increase the speed. Also, intricate jobs typically require lower speeds.

• Set the correct force. **A good starting value for force is 90**, then you can adjust force up or down depending on how thick/dense the material is to be cut. With test material in place, use the the Test Cut icon on the cutter's main screen to cut a small square in your test material to see that it cuts all the way through and can be weeded easily

• Align the pinch rollers so that they are under the guide arrows. The pinch rollers must align with the gritted sections on the bottom roller.

• A cutting mat (optional, purchased separately) can be used when cutting materials that do not have their own backing. Place your material on the cutting mat so that the pinch rollers roll on the mat, not the material. Move unused pinch rollers out of the way so they don't touch the parts of the material being cut. Use a brayer roller to flatten your material on the sticky part of the cutting mat or tape the edges of thicker materials to the cutting mat. For wider jobs, it sometimes cannot be avoided and the pinch rollers will need to roll over areas of the material being cut. Typically this is not a problem.

• When cutting long pieces of material it is important to carefully position the material so that it is completely straight and doesn't drift to one side when cutting.

Control Panel

The control panel allows direct control of the cutter state (Local/Paused), change Speed/Pressure, perform an immediate test cut, make a copy by repeating the last cut job and turn on the laser to assist with accurate positioning of the blade for contour cutting. The various buttons and functions of each button are oulined below.



"System Is Idle" message on the screen means that the cutter is ready to go.

Some screens/buttons use different terms which all mean the same thing. This might help: LOCAL = Idle = Online = Automatic = Waiting for commands from Computer or User at Control Panel PAUSE = Paused = Offline = Manual = Waiting for co-ordinates from User at Control Panel

Setting the Origin Point

The origin point of the cutter can be set whenever the cutter is in the PAUSE state by moving the cutter head with the navigation keys on the control panel and then pressing the ORIGIN key. The cutter will store a new origin point at the location of the cutter head and use this point to start cutting. Pressing RESET or power cycling the cutter will clear the current origin point, reposition the cutter head at the Home (0,0) location and store that as the new origin point. An origin point specifies the right and bottom border of where your cut will start.

Setting Speed and Force

You can manualy set the speed and force of the cutter when you are in the LOCAL state. Use the up and down arrows to adjust the speed and the left and right arrows to adjust the cutting Force.

A typical cutting speed setting is 300, and a typical cutting force setting is 90. Depending on the material you may have to adjust these values for thicker vinyl or intricate cuts.

A Basic Guide To Vinyl Cutting

Now that you've got your system fully assembled let's take a moment to test it and also take moment to learn a bit about how to "fine tune" the machine so that it will do quality cuts on the different materials you'll be cutting. To do this we'll do a standard test cut, which when competed will a simple triangle inside of a square. Load the material roll and adjust the pinch rollers. Remember to make sure the top roller is placed so that there is a bottom roller (called the "grit roller") beneath it. Remember to line the material up so that it is moving straight through the feed area, and resist the temptation to run the material close to the edge of the cutter feed area or you increase the risk of a mis-feed that will wrinkle your vinyl. (See the graphic on pages 14 and 15 for an example.)

CHOOSE BLADE

Siser StripFlock, Siser Glitter, and similar heavy stock materials,

a 60° blade is needed.

For thin and regular sized media, use a 45° blade.



Load the blade so that the length of the blade shown is not longer than the media is thick.

LOAD MATERIAL



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This Test Cut will help you to calibrate the machine for this material. Examine this cut and use a weeding tool or exacto knife to weed the square out while keeping the triangle on the paper. ("Weeding" is the word for removing the cut vinyl in the design.) CUT SPEED

This setting determines how fast the design is cut out and is usually measured in miliimeters per second.



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Contour Cutting



Calibrating the cutter

For the SC2, you will need to perform Manual Calibration to perform Contour Cutting

What you need: The Pen Tool (came with your accessories for your cutter), a piece of printer style paper

1) Prepare the Pen Tool - Scribble until the ink flows and then put it into the blade holder.

2) Load your blank sheet of paper on the right side of the cutter as shown (figure A)

3) Hold down the Right Arrow Key and turn on the Power. Continue holding down the Right Arrow Key until the paper finishes rolling back and forth, then leg go of the Right Arrow Key.

The welcome screen should now read "Verify Offset -Make a Mark..." If not, repeat this step. If successful, proceed to Step 4.

4) Press up and down on the Pen Tool, do not move it left and right, until there is an ink dot on the paper. Once you see an ink dot, press Enter to turn on the Laser.

5) Now, use the arrow keys to move the dot and the laser on top of each other. Get this as close to exact as possible. Then hit ENTER to complete the alignment. (figure B)

6) You have now successfully performed an on machine calibration of your SC2 cutter and are ready to perform the steps below for performing a contour cut in your software.



Figure A



Figure B

Aligning registration marks

2

This section applies when manual contour cutting:

Within the Contour Cutting Wizard of VinylMaster, make sure that Cutting Device is set to manual (fig 1.)

You should have already previously used Build to create a contour around you image (fig 2). Take the printed image and place the printed artwork with alignment marks in the cutter.

Note the correct orientation of the artwork for manual contour cutting (fig 3). The top of the image comes out of the cutter first and shows up side down when viewed from the front of the cutter. In this image the paper has been moved forward - normally the blade tip will be directly beside the alignment mark as seen in figure 4

Using the navigation keys on the cutter, position the blade tip so that it appears just outside the corner shaped alignment mark (fig 4). Press the Origin key on the cutter to set this as your origin point.

Press the Next key on your computer (fig 5). If you have correctly positioned the blade, the cutter will read all 4 alignment marks and start contour cutting.

Precision alignment matters a great deal when contour cutting. Take the time to get the printed artwork loaded into the cutter perfectly straight.





PROBLEM

SOLUTION

The cutter performs erratically during cuts, stops cutting before the cut is finished, or cuts lines that do not appear in the design.	Some older computers do not work well when connected via the USB port of the cutters. If you are having problems while cutting and are using the USB cable to connect from your cutter to computer, you may wish to try the serial cable connection to avoid further problems.
After the first cut is made, subsequent cuts are made over the top of the original, or vinyl is fed backwards until it loses contact with the rollers.	After a cut is made, you will need to reset the origin of the cutter. If the origin is not set again, the first origin will remain in the cutter and the cutter will return to this position before making any further cuts. To reset the origin; from the main screen of the cutter, press the Local/Pause button, move the cutting head to desired location and then press the Origin button.
Cuts are jagged or inconsistent.	The Blade may be dulled or damaged. Replace with a new blade and try again. Make sure that the blade can turn freely (by attempting to turn it with your fingers while the release button of the Blade Carriage is pressed). Adjust the blade depth of the Blade Carriage (page 17) and Force setting on the cutter (page 15) until you are getting solid, uniform cuts. Start with a blade depth of around 1/64th of an inch and a Force setting of 100g and try an increased Force setting before attempting to increase the blade depth.
Slashes are made across the vinyl from the blade movement during cutting.	If the blade is protruding too far from the Blade Carriage then it can score and cut material during normal operations. If this is occurring, the blade needs to be adjusted so that it is protruding a minimal distance from the carriage. Also, check to see that your software is registered correctly.
Vinyl not feeding straight and the rightmost Pinch Roller will not move.	Sometimes, during shipping or movement of the machine, the right pinch roller will become stuck on a screw located on the back of the machine. If this occurs and is affecting your cutting, press forcefully against the pinch roller until it becomes dislodged from its position. If needed, remove the screw to reposition the pinch roller in the desired position.
Cuts are warped and inconsistent.	Sometimes, during shipping or movement of the machine, the Carriage Arm can be dislodged from its track. Make sure that the 2 white wheels behind the carriage arm are both resting securely on top of (not in front) of the track. If the wheels are not on the track, gently lift the carriage arm and press back until both wheels are resting on the track.

Common Cutting Issues

ISSUE

Cut has dashes or looks perforated.

EXAMPLE

CAUSE

Damaged cutting strip (groove in strip) or too much blade is exposed (friction build up).

SOLUTION

Replace the cutting strip or decrease the blade depth.

ISSUE

Cut line tapers and not cutting towards the end.

EXAMPLE

CAUSE

Dull blade or blade holder isn't secured properly in slot.

SOLUTION

Replace blade, check the blade force, and secure the blade holder.

ISSUE

Blade is skipping turns and corners.

EXAMPLE

CAUSE

Part of the blade is dragging on its side during turns.

SOLUTION

Clean the inside of the blade holder by coating the blade with WD40 and moving it in and out of the blade holder. Clean off any debris that comes out. Replacement blade holder may be needed.



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Maintenance For Your Cutter

Cutting Strips for your vinyl cutter sit directly under the cutting blade as it moves back and forth across the width of the cutter. Cutting strips will need to be replaced periodically - we recommend it be done every six months if you use your vinyl cutter continuously.

You might need to change out your Cutting Strips sooner if you start experiencing an uneven depth of cut, or your material is peeling up even on slow speeds.

To replace your Cutting Strip:

- USCutter stocks replacement cutting strips. Go to USCUTTER.com and search using the keyword: Cutting Strip.
- Use a weeding tool or other pointed tool to pry up the existing strip. (For best results, start at either end of the strip.)
- Lay replacement into the channel and use a heat gun or hair dryer to heat the strip up as you squeeegee it into place.
- Use a knife to trim the ends of the strip so that it fits in the channel.

Cutting Blades wear out with use and the tips of the blades can snap just like the point of a sharp pencil. (This is particularly true of the 60 degree blade.) You should also periodically visibly inspect your blades and if you see visible chips in the edge it's best to replace the blade with a new one. (This is also a good time to wipe away any vinyl debris that has built up inside the blade holder.)

You might also consider the replacement of your blade if you develop problems weeding or otherwise experience problems with cut quality.

Refer to the manual section on Blade Set-up for instructions on how to install replacement blades and remember to dispose of your old blade safely by putting it in an aluminum can or other closed hard container.





Warranty Information

USCutter offers a limited 1 year warranty on the SC2 cutter.

Details of our standard warranty policy can be viewed on-line at the following link:

www.uscutter.com/Warranty-And-Returns-Policy

Online Help Information for the SC2

For more information on how to use your SC2 vinyl cutter, please visit our online Support Portal: support.uscutter.com

Once there, click on "SC2" in the Vinyl Cutters section!

Another link to the same information is https://www.uscutter.com/SC2-Support

WE RECOMMEND USAGE OF THE FOLLOWING VINYL WITH YOUR NEW SC2 CUTTER:



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