

# TITAN

## VINYL CUTTER

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User Manual & Assembly Instructions



**USCutter** 

# Save big on bundles

*The fastest and most economical way to get started.*

## Greenstar Outdoor Starter Pack



**GreenStar**

GreenStar 12-Color Starter Kit  
Green Star IPV vinyl is great for general purpose interior/exterior graphics of all types. An excellent vinyl to cut, weed and transfer, Green Star IPV vinyl has an outdoor lifespan of up to 5 years (3 years for metallic vinyl) and is made in USA. Includes twelve 24" x 5 yard rolls.

Go to [USCutter.com](http://USCutter.com) and search keyword: "Greenstar outdoor bundle" for pricing.

## Siser Start Bundle



**Siser**  
**EasyWeed**  
by Siser

The Siser EasyWeed Starter Kit consists of twelve 15" by 12" sheets of Siser EasyWeed heat-transfer vinyl in the 12 most popular colors. A great way to get acquainted with this versatile product!

Go to [USCutter.com](http://USCutter.com) and search keyword: "Siser starter bundle" bundle for pricing.

Take Your Craft Cutting to the NEXT LEVEL

## Oracal 631 Starter Kit



**ORACAL**

The ORACAL 631 24 x 5 Sample Pack contains 12 of the most popular colors in the ORACAL 631 line. ORACAL 631 vinyl is a removable calendared vinyl that is ideal for most indoor applications. It features a lower-tack adhesive that won't damage interior walls during removal. Also has a matte surface which matches interior paint

Go to [USCutter.com](http://USCutter.com) and search keyword: "Oracal 631" bundle for pricing.

## Etched Glass Kit



**ORACAL**

Oracal 8510 gives the professional appearance of etched glass for a fraction of the price and labor associated with sandblasting. This vinyl is meant for long-term indoor and outdoor window application to provide business names, logos and other graphics on entrance doors, street-facing windows, and corporate environments. This starter kit includes a 24" x 10 yard roll of coarse silver structure vinyl, clear high-tack application tape for accurate registration and ease of use, a squeegee, and application fluid for wet application.

Go to [USCutter.com](http://USCutter.com) and search keyword: "etched glass kit" for pricing.

 **SAME DAY SHIPPING**  
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GET EVERYTHING FOR YOUR VINYL CUTTING NEEDS

**USCutter**

[www.uscutter.com](http://www.uscutter.com)  
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Thank you for purchasing this Titan 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](http://www.uscutter.com)

## Please read and heed these important safety messages:

- This device uses sharp blades to cut vinyl. Take care not to touch the blades or gears during operation!
- Make sure this device is not connected to power during assembly, service, and maintenance. Also beware of static build-up. We recommend using mats and anti-static vinyl systems.
- Vinyl cutting is not recommended for young children.



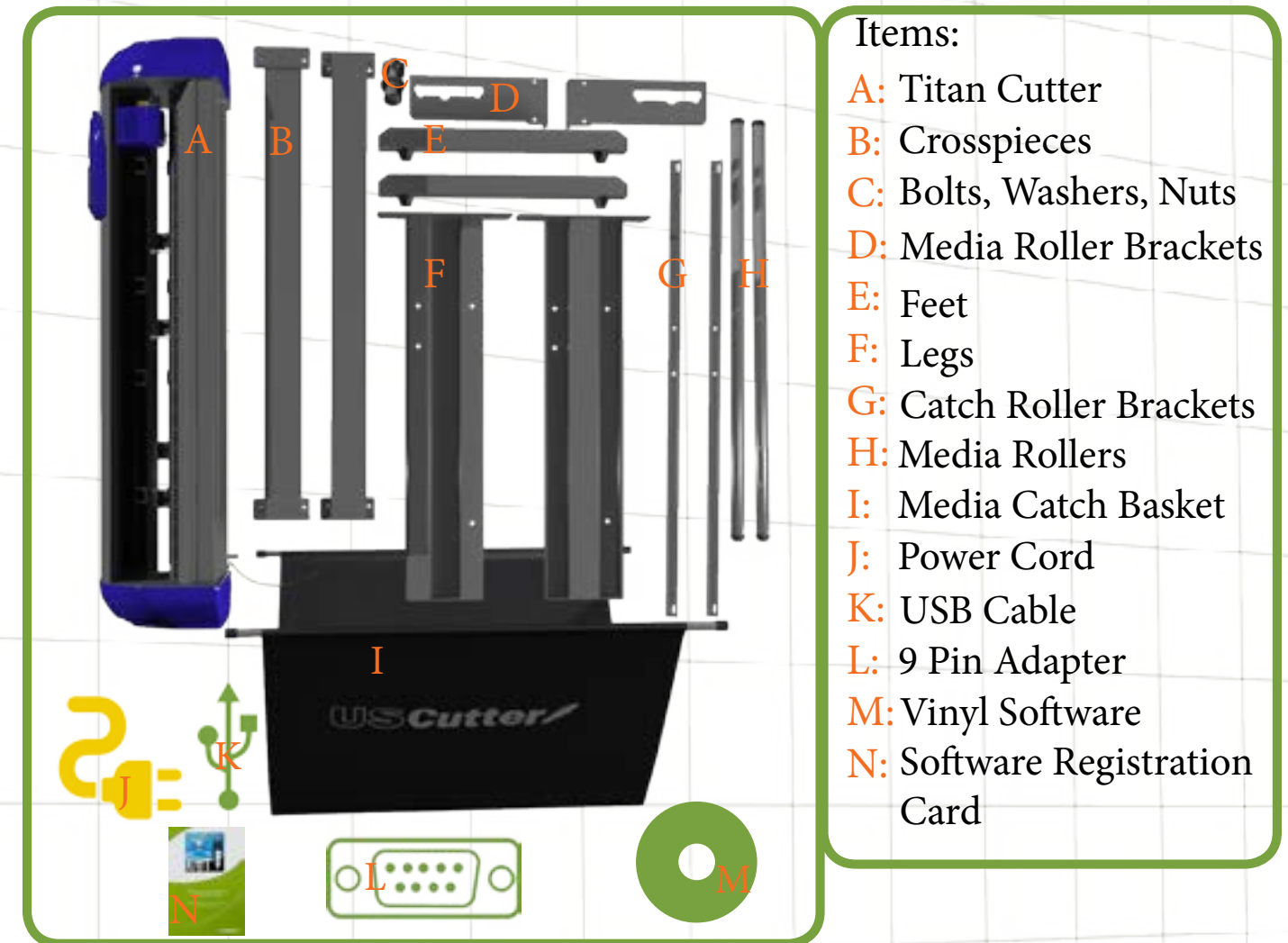
## Where to use and store your vinyl Cutter

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.

- 1 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.
- 3 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.
- 4 Access is important. This 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 Titan 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.



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



### Items:

- A: Titan Cutter
- B: Crosspieces
- C: Bolts, Washers, Nuts
- D: Media Roller Brackets
- E: Feet
- F: Legs
- G: Catch Roller Brackets
- H: Media Rollers
- I: Media Catch Basket
- J: Power Cord
- K: USB Cable
- L: 9 Pin Adapter
- M: Vinyl Software
- N: Software Registration Card

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

## 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 included in the box:

1. 6mm Allen Wrench
2. Pliers, or a Crescent Wrench

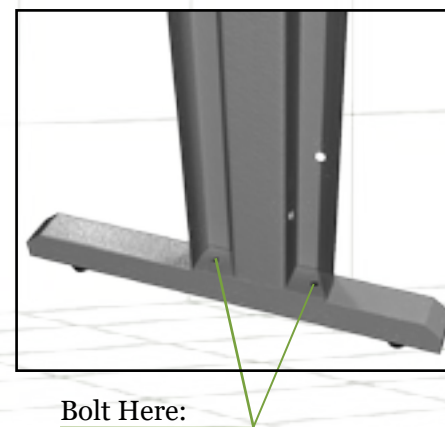
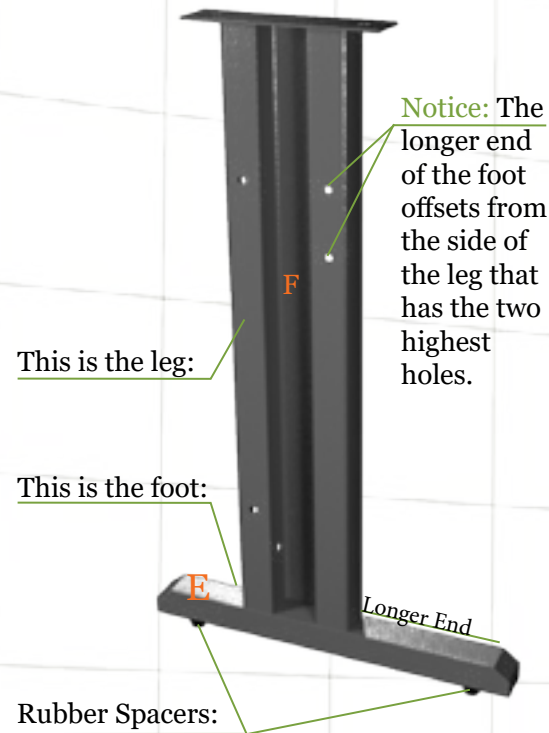
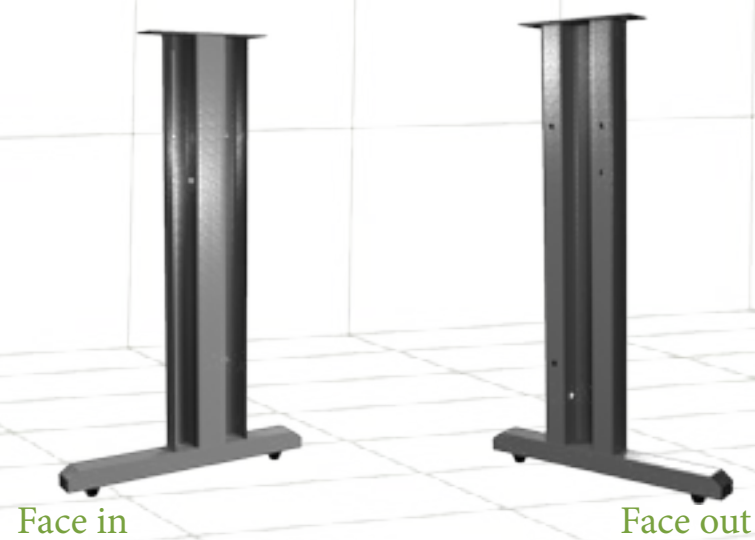
Here's how to assemble the stand:

## Step 1.

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

Attach the feet to the legs with 4 bolt sets (2 sets per leg). If they aren't already installed, screw in the rubber spacers to the bottom of each end of the feet.

The middle indentation of the leg should be facing in. The two outside indentations are where we will attach the crosspieces.

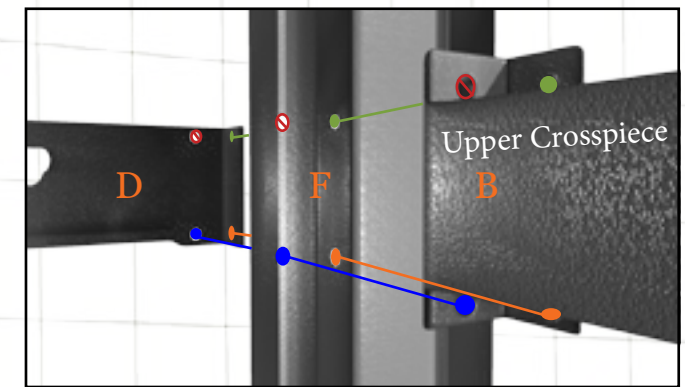
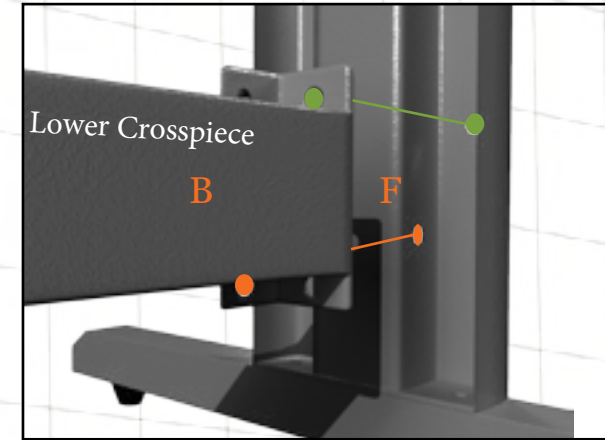
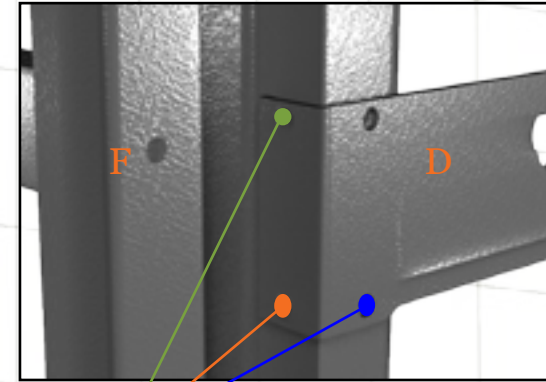


## Step 2.

Attach the lower crossbrace to the leg (F) using 2 bolt sets. Next, attach the upper crosspiece (B) and media roller bracket (D) to the inner and outer portion of the leg using these three bolts here.

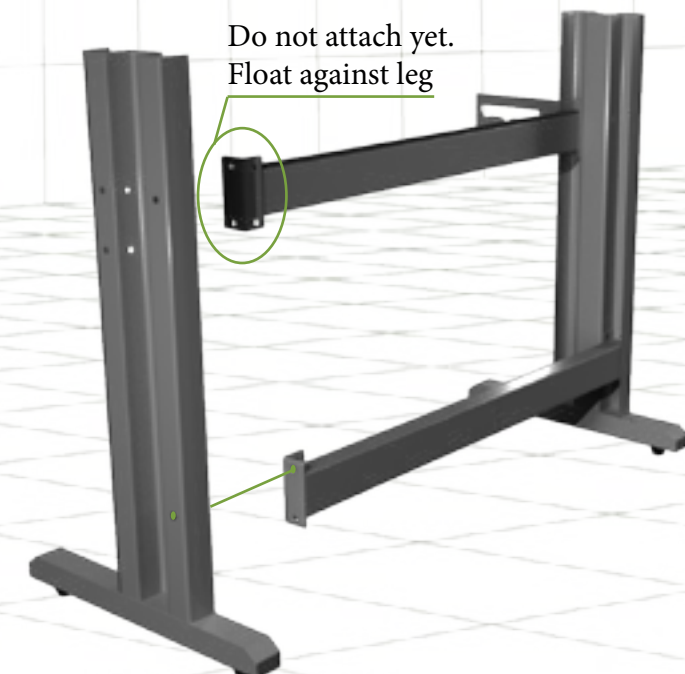
The open hole is where we will attach the catch roller bracket in a later step.

Note: The bottom crosspiece only attaches with two bolt sets on each end despite having four holes. The extra holes are not used.



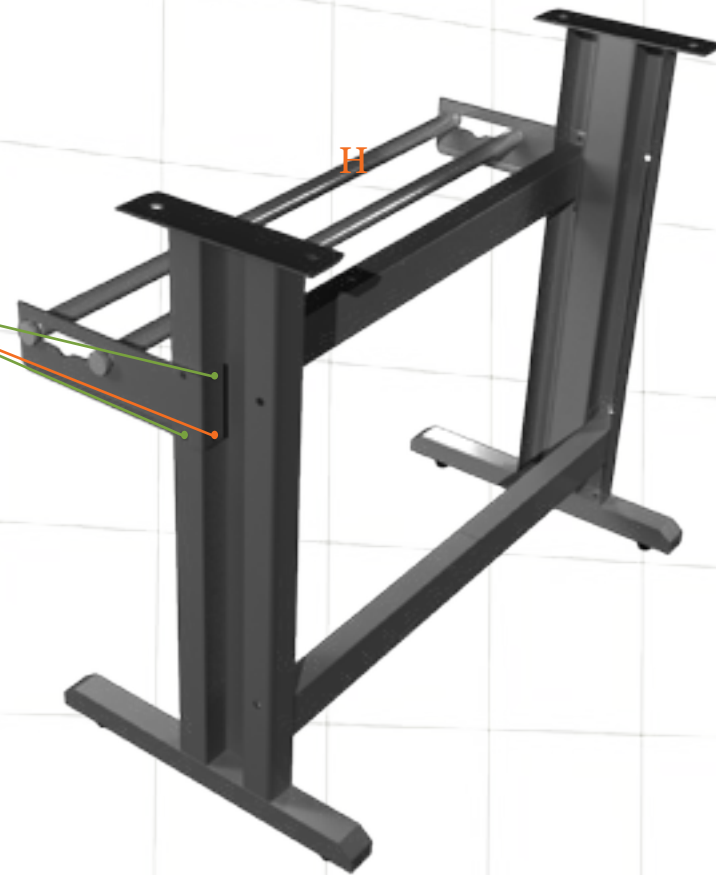
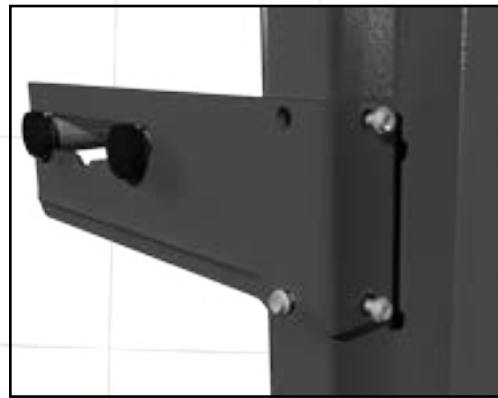
## Step 3.

Now, let's mount the other leg assembly by connecting the bottom crosspiece to the adjacent holes and "floating" the upper crossbrace in the adjacent slot. Do not attach the other side of the upper crossbrace yet as we will need access to this portion for the next step.



### Step 4.

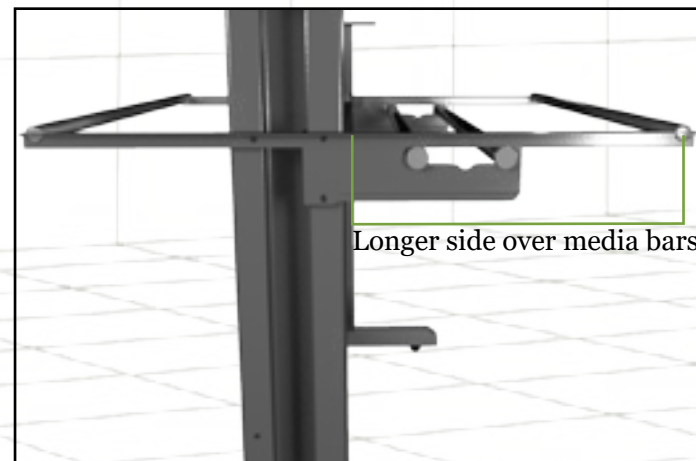
Carefully set the media roller bars (H) inside the previously installed media roller bracket, and the uninstalled media roller bracket while holding it next to the leg. Run bolt sets through the same holes of the media roller bracket, leg, and top crosspiece as we did on the other side with step 2 [here](#).



### Step 5.

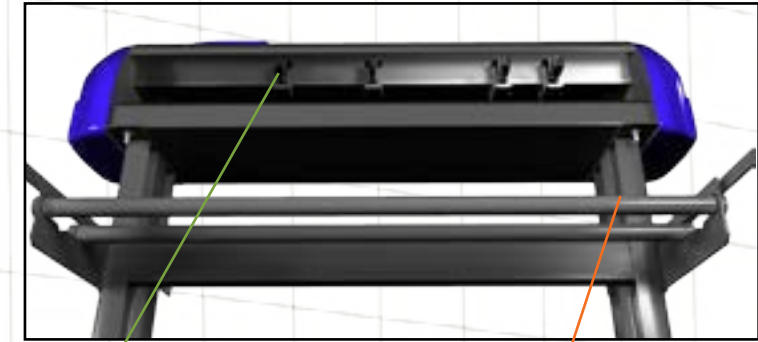
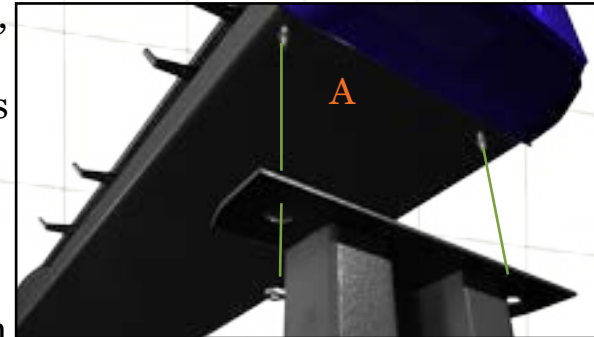
Install the Media Catch Roller Brackets so that the side with the most distance from the holes is directly above the Media Roller Brackets with the lip at the top and facing out.

Use two bolt sets per side threading one set through the Media Roller Brackets, Leg, and Top Crosspiece. Then set the media catcher poles and basket into the rounded slots on each side.



### Step 6.

Place the Titan Cutting module (A) on top of the stand running the bolt threads, rubber spacers, and washers on the bottom of the module through the holes on top of the leg mounts. Make sure the media rollers are on the same side as the back of the module. Connect using the remaining four nuts.

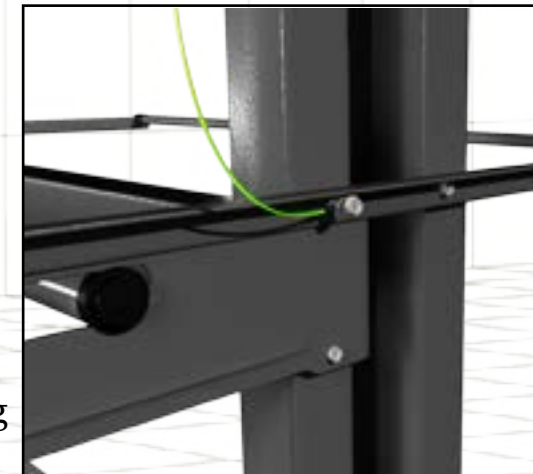


Position back of the pinch rollers over media rollers.

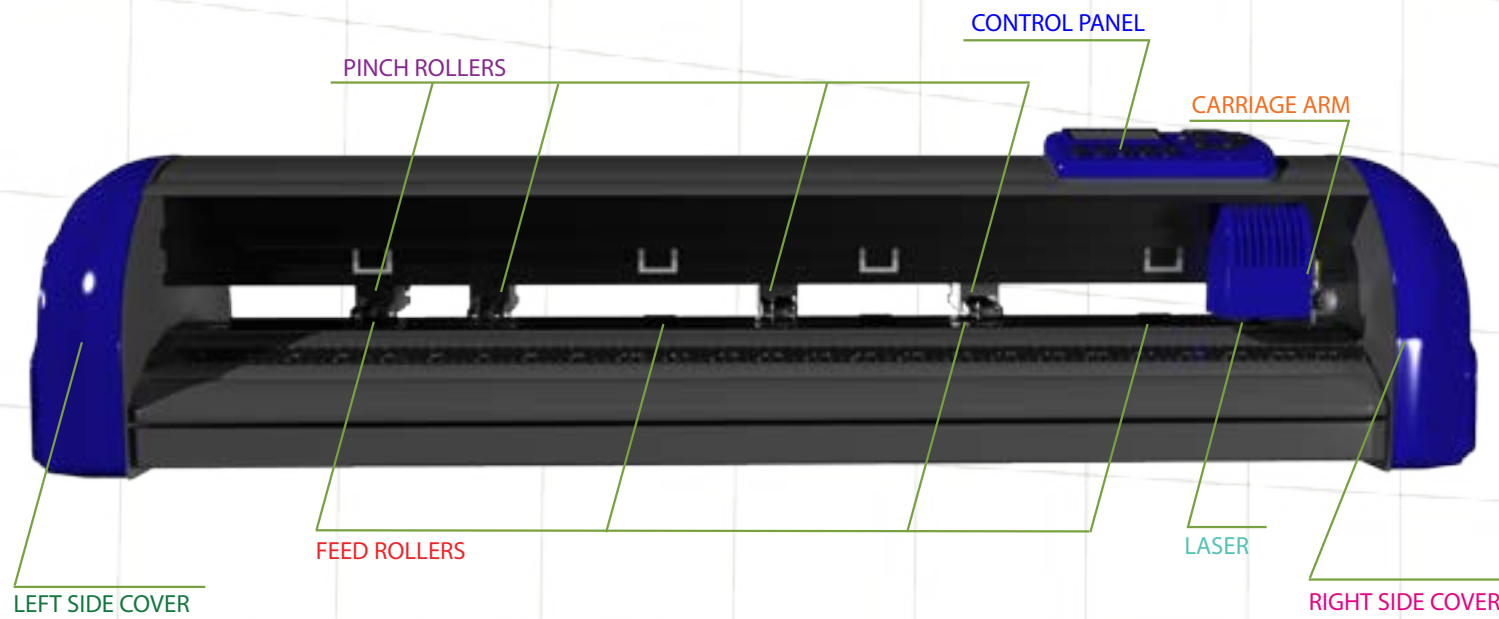
### Step 7.

Locate the grounding wire coming out from behind the bottom of the left end cap.

Loosen the bolt on the outside of the leg and connect the other end of the grounding wire by tightening the bolt back into the leg.



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**

Positions the cutting material during operation.

**LASER**

Used by the cutter to determine the location of cut contours.

**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.

**RIGHT SIDE VIEW**



**USB CABLE PORT**

Used to connect a USB cable from the cutter to a computer.

**SERIAL (COM) CABLE PORT**

Used to connect a serial cable from the cutter to a computer.

**SERIAL (COM) CABLE PORT**

**USB CABLE PORT**

**LEFT SIDE VIEW**



**POWER CABLE PORT**

Used to connect a power cable from the cutter to a wall outlet or surge protector.

**POWER SWITCH**

Main power switch for turning the power of the cutter on (1) or off (0).

**FUSE CARTRIDGE**

Allows access to the fuse inside of the cutter.

**POWER CABLE PORT**

**FUSE CARTRIDGE**

**POWER SWITCH**

**CARRIAGE SLOT**

Holds the blade carriage in place.

**LOCKING KNOB**

Allows access to the blade/pen carriage slots for exchanging/replacing carriages.



**LOCKING KNOB**

**CARRIAGE SLOT**

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



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.



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

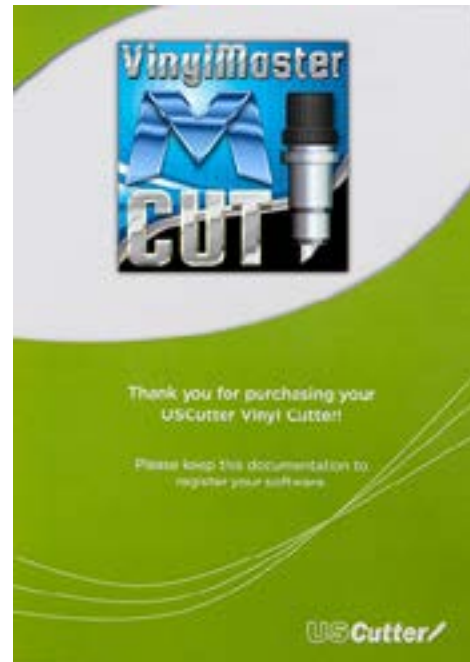
You will need to download and install drivers for the USB connection to work properly. Go to [www.uscuttersupport.com/mh-support-page](http://www.uscuttersupport.com/mh-support-page) and select the driver that supports your Windows version.

INSTALLING VINYL MASTER SOFTWARE

Your Titan Vinyl Cutter comes bundled with VinylMaster Cut software, an easy to use software with the tools to help you take your projects from concept to a ready to cut computer image file.

You can download and install the VinylMaster Cut software at [www.uscutter.com/download](http://www.uscutter.com/download), and 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, then [HELP TOPICS](#).

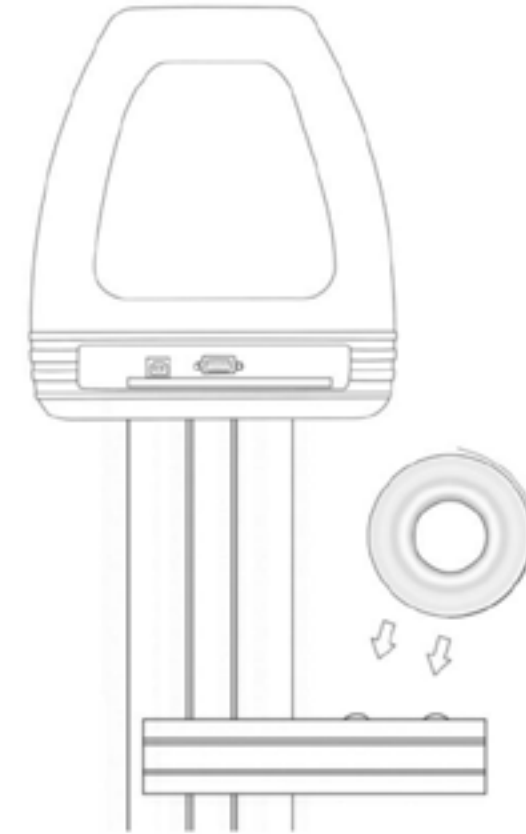


If you are going to cut from a scrap or single sheet instead of a roll, then skip the next step on placing a vinyl roll. All other steps will be the same.

1

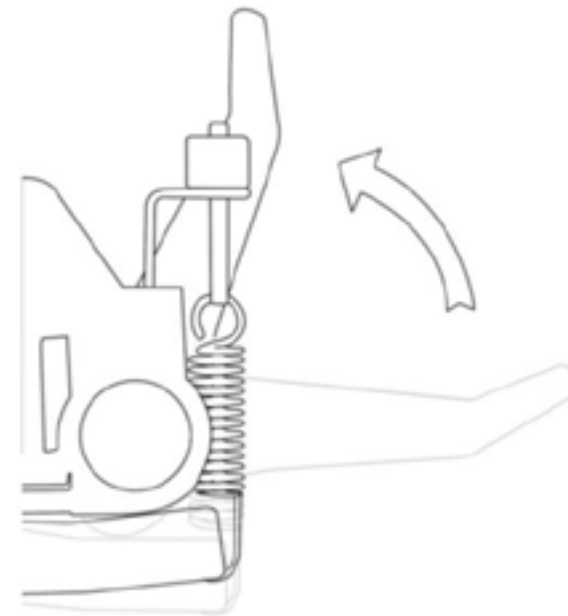
Place the roll on top of the stand rollers.

For heat press vinyl, please flip the roll.



2

Release the pinch rollers release levers.



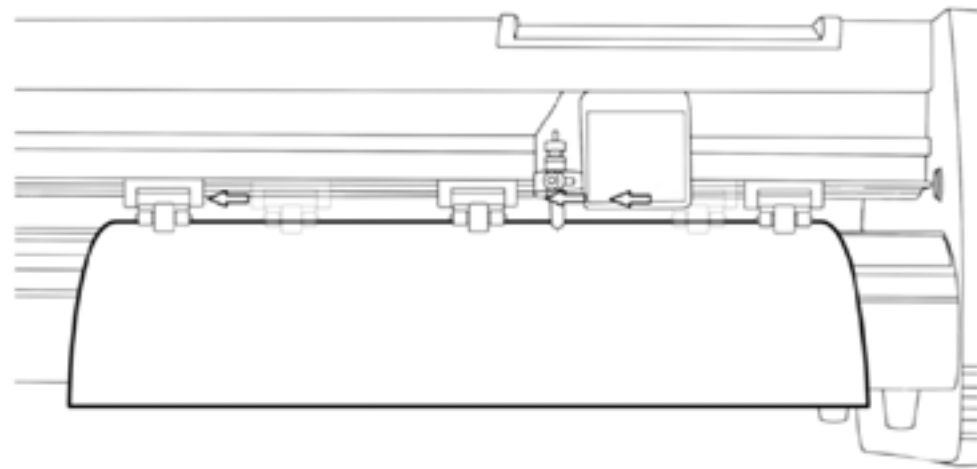
3

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).



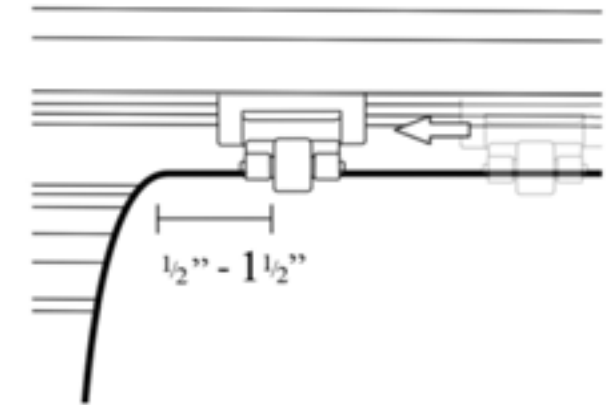
4

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.



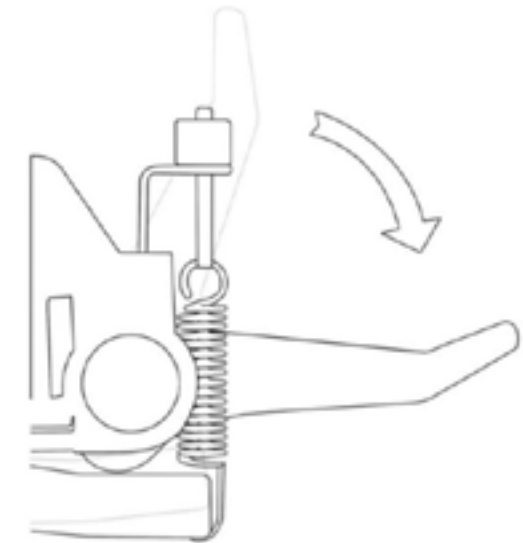
5

Leave a gap of between 1/2" - 1 1/2" from the edge of the roller and the edge of the vinyl on both sides.



6

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



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



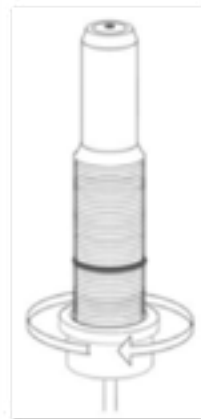
1

Unscrew the cap from the Blade Carriage.



2

Set Brass Ring on Blade Carriage to the fully down position.



3

Remove the protective cover from a new blade.



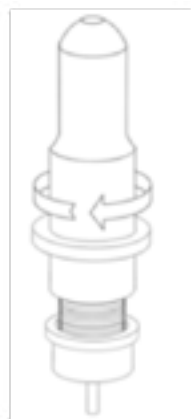
4

Insert the blade into the top of the Blade Carriage.



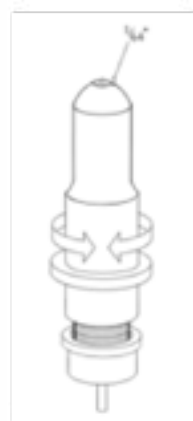
5

Screw the cap back onto the Blade Carriage.



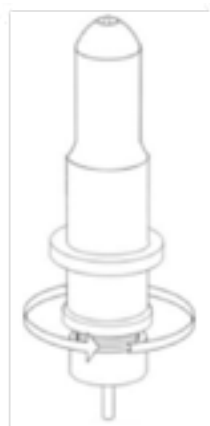
6

Adjust the carriage cap until the blade is protruding approximately 1/64<sup>th</sup> of an inch.



7

Adjust the Brass Ring until it fits snug against the Cap. This will help keep the cap in place during operation.



Blades should be replaced every 6 months. Your blade may need to be replaced more often if you are cutting thicker material such as flock, glitter, or reflectives.

## Setting the Origin for your Titan cutter

To set the Origin of where the Titan cutter will begin cutting from press the “Offline” button then press the arrows. Left and right will move the carriage, and up and down will move the feed rollers in and out. When the carriage is located where you want it to start, press the “Enter” button on your control panel and the origin is set. Pressing the “Reset” button simply brings the carriage back to it’s home origin.



## Changing your Titan’s Speed and cut Force

To set speed and force of the Titan, 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 is 500mm/s, and a typical cutting force is 100g.

**RESET** Cancel current processes and jobs.

**OPTION** Scrolls through Options

**SET** Allows scrolling through further configurations menus/settings for calibrating.

**TEST** Performs cutting test to ensure that settings are adjusted correctly.

**LASER** Turns on laser located under cutting carriage.

**ENTER** Selects displayed option/sets the origin.

**SPEED** Online: Adjusts cutting speed. Offline: Adjusts media feed rollers back and forth.

**FORCE** Online: Adjusts cutting depth. Offline: Adjusts cutting carriage back and forth.

**ON/OFF LINE** Switch between online and offline mode. Use the offline mode to configure your settings and set your origin. Use the online mode for cutting operations.

# Making Your First Test Cut

## 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 completed 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 the top of pg. 21 for an example.)

Assuming you're cutting standard signage vinyl, you'll want to use your 45° blade. If you received vinyl along with your cutter package, chances are very good it's a standard GreenStar or Oracal signage vinyl. Now, find the TEST button on the cutter control pad and press it. It should cut a pattern that looks like this:



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.) Use this simple diagram to make adjustments. There's a certain amount of trial and error to it at first, but you'll quickly get a feel for it.



### CHOOSE BLADE

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.

For thicker materials, such as Siser StripFlock, Siser Glitter, and Hexis CutFlex 600 Reflective, a 60° blade is needed.

### CUT SPEED

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

- small intricate designs → DECREASE CUT SPEED
- large simpler designs → INCREASE CUT SPEED



### LOAD MATERIAL

Most vinyl products are loaded from over the top.

### FORCE/PRESSURE

This setting determines how hard the blade comes down onto the material.

Test Cut

- outer square won't weed → INCREASE FORCE
- blade digging too far into carrier → DECREASE FORCE
- weeds easily with a lightly scored carrier → PERFECT!

**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 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. If a serial cable connection is not available on your computer, you can try a third party USB to serial connector or a PCI card serial adapter for your computer.

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 Offline/Pause button on 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 8) until you are getting solid, uniform cuts. Start with a blade depth of around 1/64th of an inch and a pressure setting of 100g and try an increased pressure 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.

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.

**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.

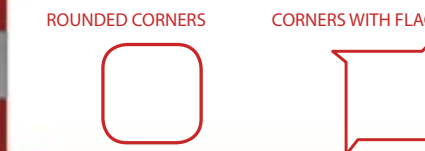
**SOLUTION**

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.

**ISSUE**

Corners are not cutting correctly.

**EXAMPLE**

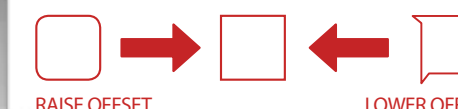


**CAUSE**

Offset setting is incorrect.

**SOLUTION**

Change the offset setting.



**Cutting Strips** for your vinyl cutter 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.

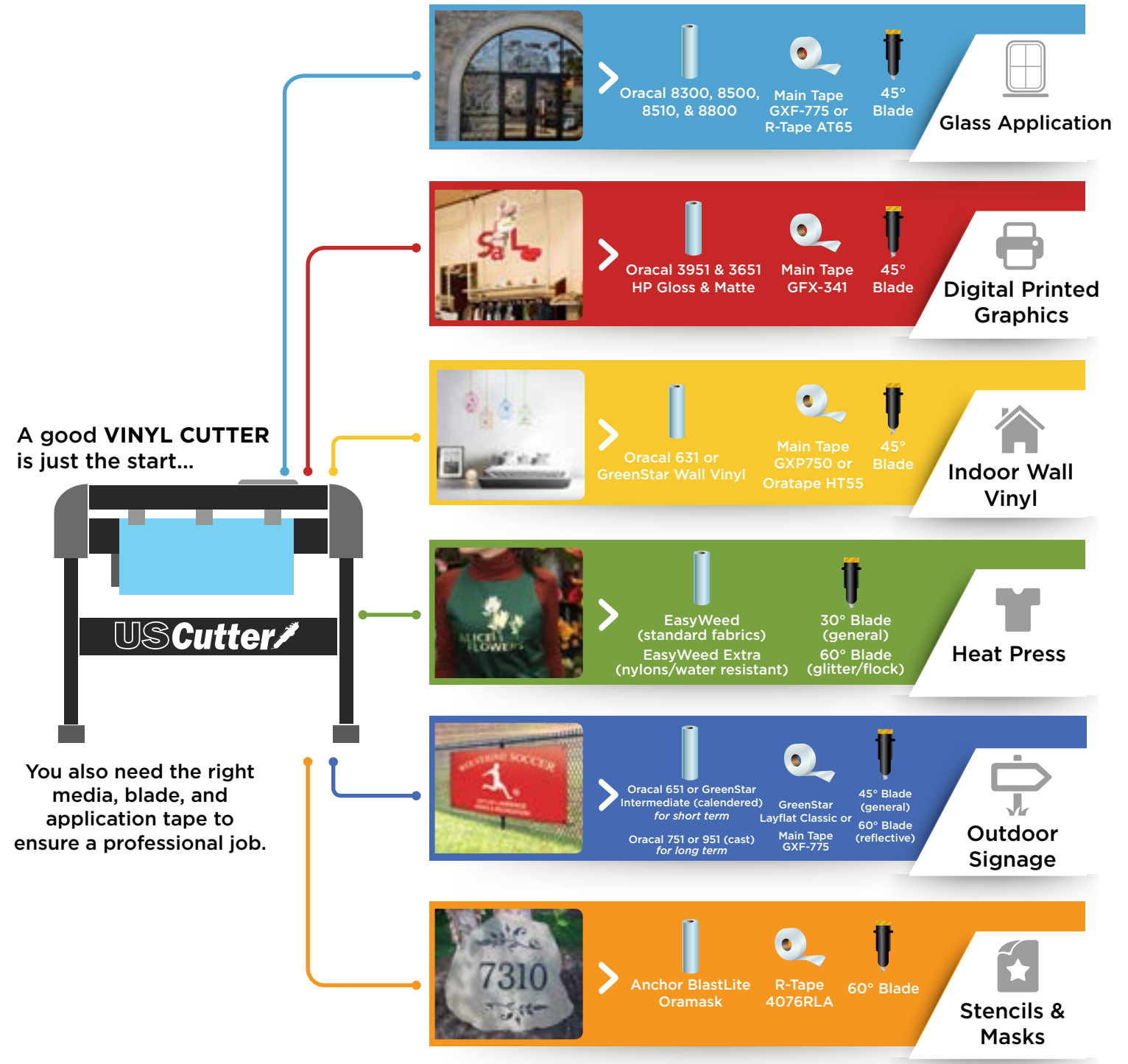
To replace your Cutting Strip:

- 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 squeegee 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.



GET EVERYTHING FOR YOUR VINYL CUTTING NEEDS

**USCutter**

www.uscutter.com

425.481.3555

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



COLOR THEORY



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