BREN Inc

Quality Marking Products Since 1972

BREN 700-Series Razor User Manual

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Important Information

Thank you for purchasing the *BREN 700-Series Razor Cutter.*

Before you use the cutting plotter, please make sure that you have read the safety precautions and instructions below.
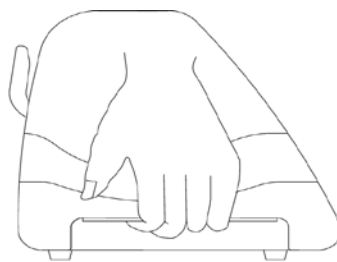

!
Caution

SAFETY PRECAUTIONS!

➢ For safety concern, please always hold the cutter firmly **from the bottom** while moving it. Do not move the cutter by clasping the depression area on both sides.
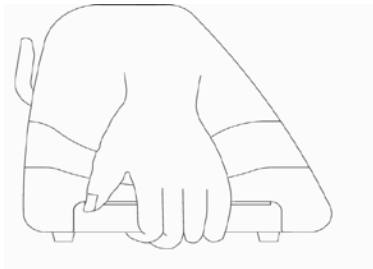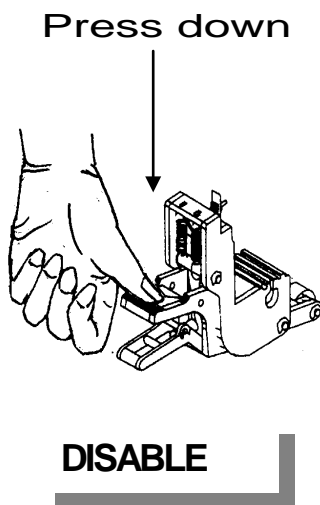

O (Correct)
Hold from the bottom

X (Incorrect)
Hold the depression area

➢ Do not shake or drop the blade holder, a blade tip can fly out.

➢ During an operation, do not touch any of the moving parts of this machine (such as the carriage). Also be careful to make sure that clothing and hair do not get caught.

➢ Always connect the power cable to a grounded outlet.

➢ Always use the accessory power cable which is provided. Do not wire the power cable so that it becomes bent or caught between objects.

➢ Do not connect the power cable to branching outlet to which other machines are also connected, or use an extension cable. There is danger of overheating and of mis-operation of the machine.

➢ Keep the tools away from children where they can reach.

➢ Always put the pinch rollers within the white marks.

Warning

Never press the top release grip and pull the bottom release grip at the same time as the pictures shown below:

O (CORRECT)

Press down

DISABLE

X (INCORRECT)

Press down

Stop bar

Pull up bottom to release grip

ENABLE
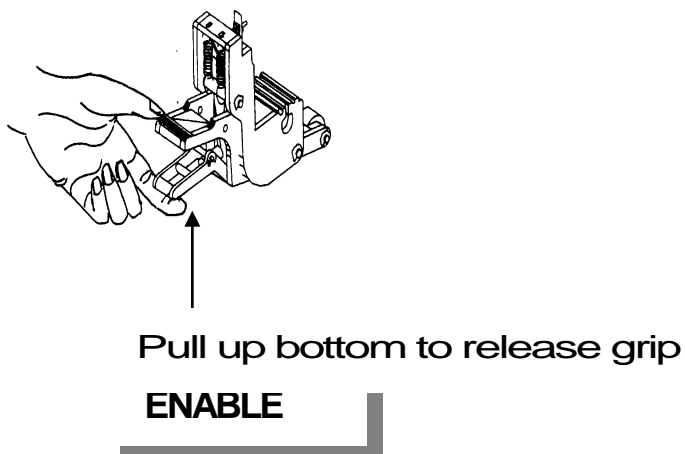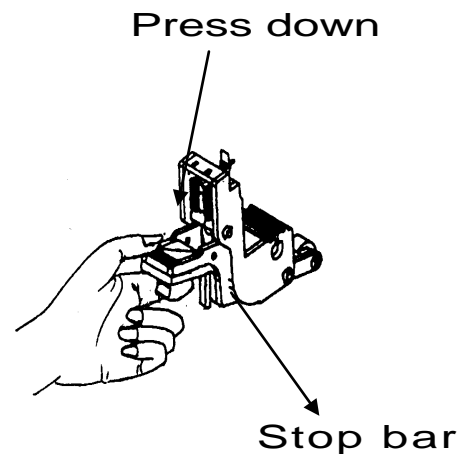
Note:

In case the grips clipped together due to your wrong operation, please use a pair of tweezers to pull out the stop bar when pressing down the top release grip. Keep the stop bar outside then release the grips as the right figure.

Chapter 1   General Information

1.1   Introduction

BREN 700-Series Razor cutting plotters have been designed to produce computer-generated images or perform contour cutting on sheets or rolls of vinyl media.

This manual covers the following models of BREN 700-Series Razor series cutting plotters:

・BREN 724	for media width: 2 inches - 24 inches.
・BREN 740	for media width: 2 inches - 40 inches.
・BREN 752	for media width: 2 inches - 52 inches.
	Above values are cut widths.

1.2   Package Items

The package of the 724 Razor model contents the items listed below, please check carefully. If you find any item missing, please consult your local dealer for further assistance.

Standard Item	Quantity
1. Cutting Plotter	1
2. Stand Set (for BREN 724 Razor only) ● 2 piece of T-shape stand ● 1 piece of stand beam ● 20 pieces of M6 screws ● 1 piece of M5 L-shape hexagon screw driver ● 1 piece of Installation Guide for Stand Set	1

3. Media Support System Package

Items	740-752	724	
1 set of Roll Media Flange (2 pieces)	V	V	
1 set of Roll Holder (2 pieces)	V	V	
1 set of Roll Holder Guide Bushes (4 pieces)	V	V	
1 set of Roll Holder Support (2 pieces)	V	V	
1 piece of M6 L-shape hexagon screw driver	V	V	
1 piece of Installation Guide for Roll Holder		V	**1**
1 piece of M4 L-shape hexagon screw driver		V	
1 set of Desktop Support Brackets (2 pieces)		V	
4 pieces of Plastic Foot		V	
4 pieces of M4 screws		V	
12 pieces of M6 screws		V	

4. Accessories
- 1 piece of User's Compact Disk
- 1 piece of AC power Cord
- 1 piece of data cable (USB cable: 3m)
- 1 set of Blade Holder Assembly (Installed in tool carriage of the cutting plotter)
- 1 piece of Blade (Installed in Blade Holder)
- 1 piece of Safe Blade
- 1 piece of Tweezers
- 1 piece of Ethernet Cable

1

1.3   Product Features

The following are the main features of the BREN 700-Series Razor cutting plotters:

- Triple-port connectivity provides you with greater flexibility
- Up to 600 gram cutting force
- Up to 1530 mm per second (60 ips) cutting speed (at 45° direction)
- Guaranty 10-meter tracking
- User friendly and multi-language control panel
- Ingenious media basket (optional item)
- Enhanced Automatic-Aligning System for automatic contour cutting

1.4   Appearance of BREN 700-Series Razor.

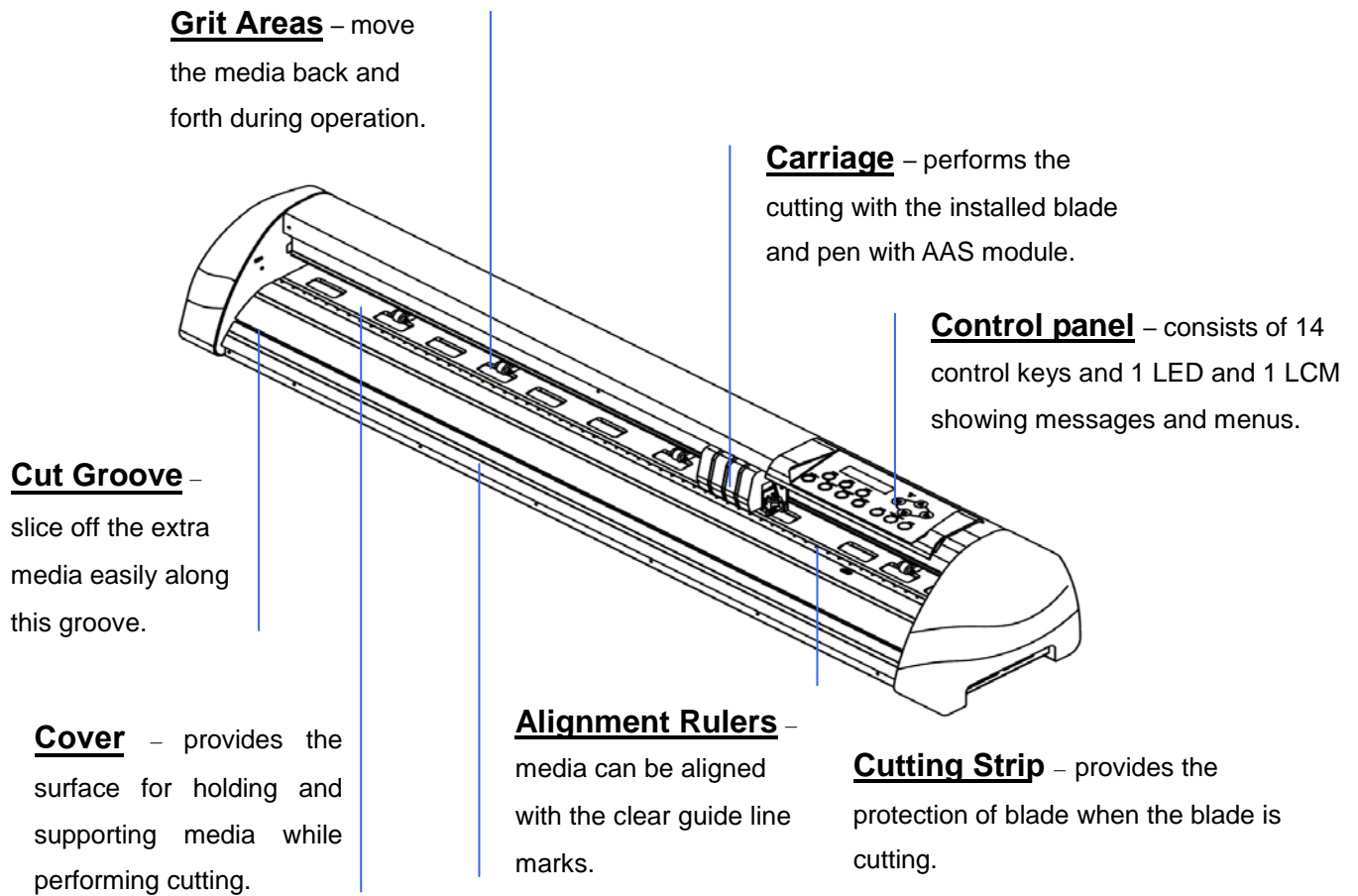### 1.4.1   The Front View (Figure 1-1)

Grit Areas – move the media back and forth during operation.

Carriage – performs the cutting with the installed blade and pen with AAS module.

Control panel – consists of 14 control keys and 1 LED and 1 LCM showing messages and menus.

Cut Groove – slice off the extra media easily along this groove.

Cover – provides the surface for holding and supporting media while performing cutting.

Alignment Rulers – media can be aligned with the clear guide line marks.

Cutting Strip – provides the protection of blade when the blade is cutting.

Figure 1-1

1.4.2   The Back View (Figure 1-2)

Lever – raises or lowers the pinch rollers.

Pinch Rollers – hold the media during cutting.
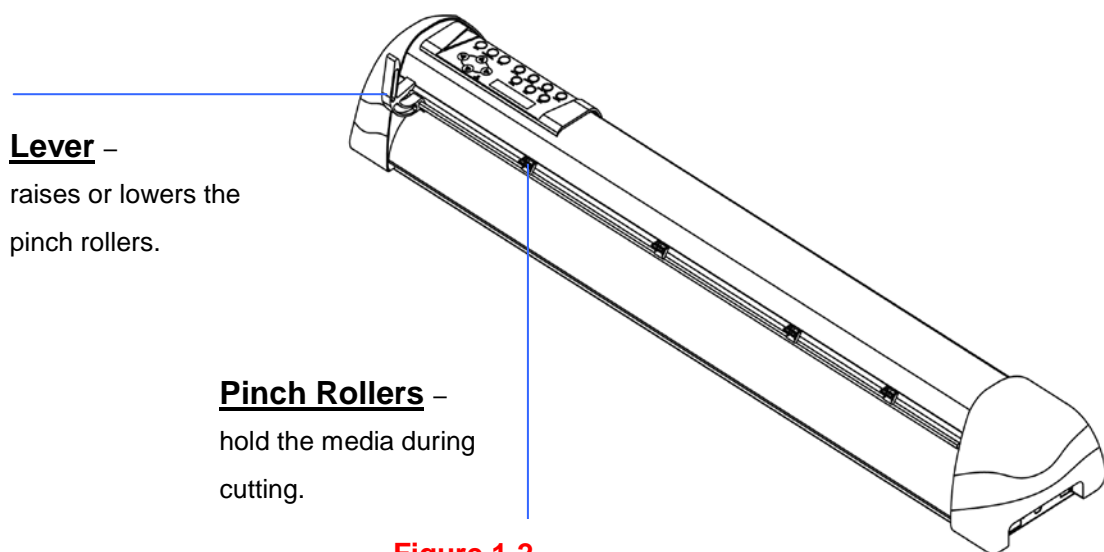
Figure 1-2

1.4.3 The Whole View of BREN 700-Series Razor (Figure 1-3)

Roll Holder – holds and supplies the roll media for cutting.

Roll Holder Guide Bushes – serve to keep the roll media in place when media is pulled from the roll.

Roll Holder Support – supports roll holders.

T-Stand –supports the cutting plotter

T-Stand –supports the cutting plotter

Stand Beam – stabilizes the body.
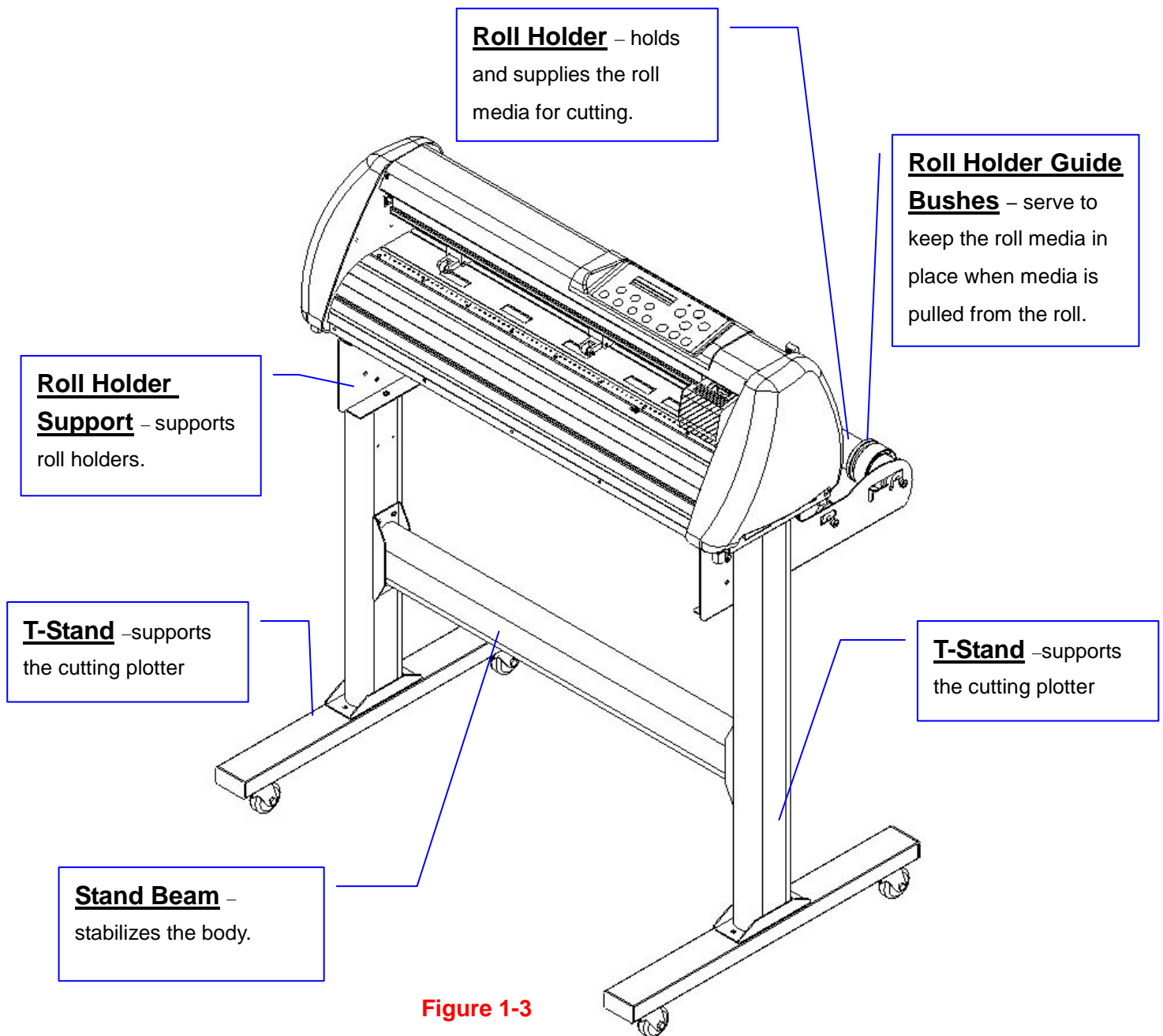
Figure 1-3

1.4.4 The Left-hand Side (Figure 1-4)

Figure 1-4

Power Switch – On when switches to [I]; Off to [O]

Fuse – 3 Amp.

AC Power Connector – used to insert the AC power cord.

1.4.5 The Right-hand Side (Figure 1-5)

Figure 1-5

Serial Interface Connector (RS232C) – used to connect the cutting plotter to a computer through a serial interface cable.

Ethernet Connector– used to connect your computer to a local area network.

USB Connector – used to connect the cutting plotter to a computer through a USB cable.

Chapter 2   Installation

2.1   Precaution

Please read below information carefully before you start installation.

Notice 1

- ● Make sure the power switch is off before installing the cutting plotter.

- ● Carefully handle the cutter to prevent any injuries.

Notice 2 **Choosing a proper place before setting up the cutting plotter**

Before installing your cutting plotter, select a suitable location, which meets the following conditions.

- ● The machine can be approached easily from any direction.

- ● Keep enough space for the machine, accessories and supplies.

- ● Keep the working area stable, avoiding sever vibration.

- ● Keep the temperature between *15 and 30℃ (60-86°F)* in the workshop.

- ● The relative humidity of the working environment should be between **25% to 75%**.

- ● Protecting the machine from dust and strong air current.

- ● Preventing the machine from direct sunlight or extremely bright lighting.

Notice 3 **Connecting the Power Supply**

Check the plug of the power cord to see if it matches with the wall outlet. If not, please contact your dealer.

- ● Insert the plug (male) into a grounded power outlet.

- ● Insert the other end (female) of power cord into the AC connector of cutting plotter.

2.2 Media Support System [for BREN 700-Series Razor]

Step 1

Please examine supplied items in the accessory box of stand carton:

- 1 set of roll media flange (2 pieces)
- 1 set of roll holder (2 pieces)
- 2 pieces of base beams
- 2 pieces of side beams
- 1 piece of stand beam
- 2 pieces of roll holder support
- 20 pieces of M6 screws
- 1 piece of M5 L-shape hexagon screw driver
- 1 piece of installation guide for stand set

Step 2

- Remove the plotter body and the accessories from the shipped carton.
- Assemble the base beam to the side beam with 2 screws to form a T-shape stand.
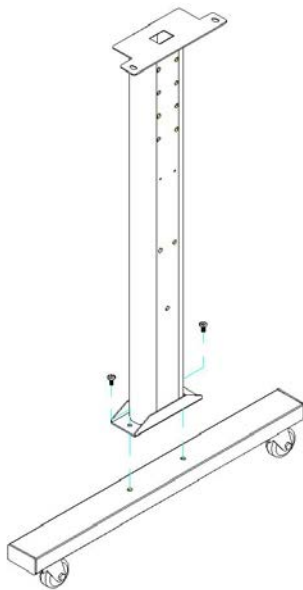 (See Figure 2.2-1)

Figure 2.2-1

Please pay attention to the direction of the base beam (the wheel on the front end of the beam comes with a break while the rear one is on its own).
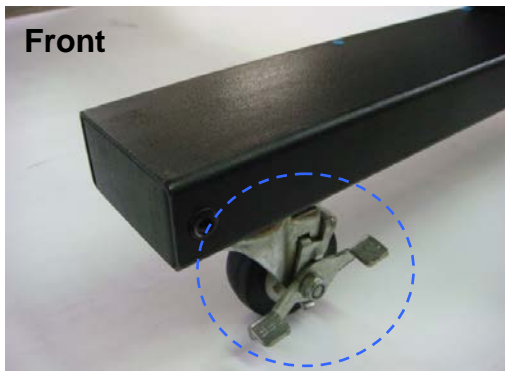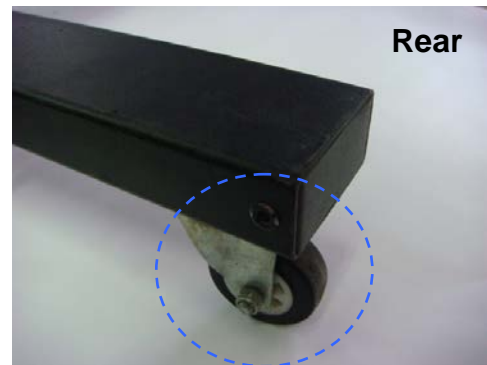

Front

Figure2.2- 2

Rear

Figure2.2- 3

Step 3

Place the stand beam upright on the T-stand and follow number ❶❷ to assemble (See Figure 2.2-4 & 2.2-5). There is hexagon socket head screws fasten on the T-stand on both side taken as locating pins.

❶ **T-Stand**
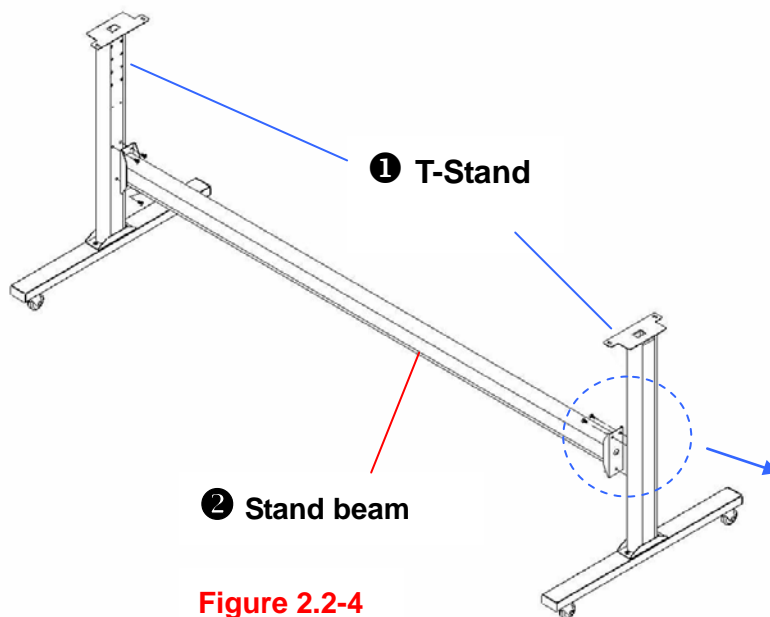
❷ **Stand beam**

Figure 2.2-4

Figure 2.2-5

Step 4

Position the stand beam perpendicularly to part ❶ and put the screws into the holes and tighten them as Figure 2.2-5. Then the complete picture of stand will be like Figure 2.2-4.

Step 5

Remove the cutting plotter from the carton. Position your stand under the plotter, on the bottom of the plotter, there is one hole on each side in the position corresponding to the locating pins, so the locating pins can be located into the holes. Then insert the screws into the holes on the stand to fix the plotter and tighten them up as shown in Figure 2.2-6.
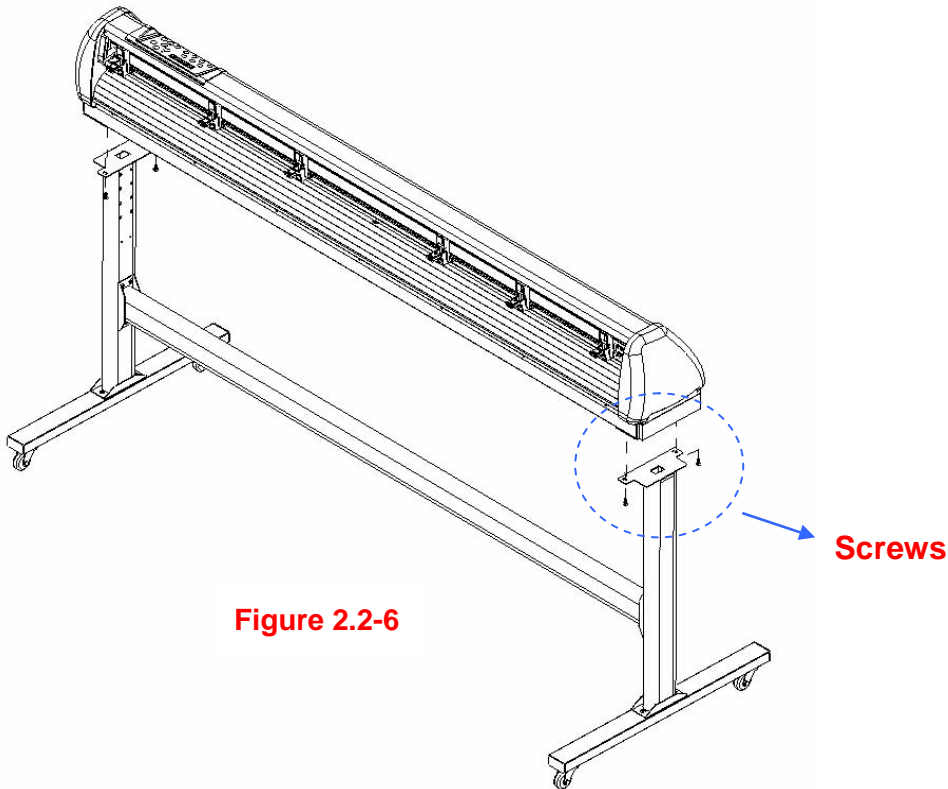
Screws

Figure 2.2-6

Step 6

Insert the roll holder support with the screws into the holes of the stand, and then tighten them up as shown in Figure 2.2-7. You could decide roll holder support's position by inserting into different holes.

Figure 2.2-7

3 screws

Roll holder support
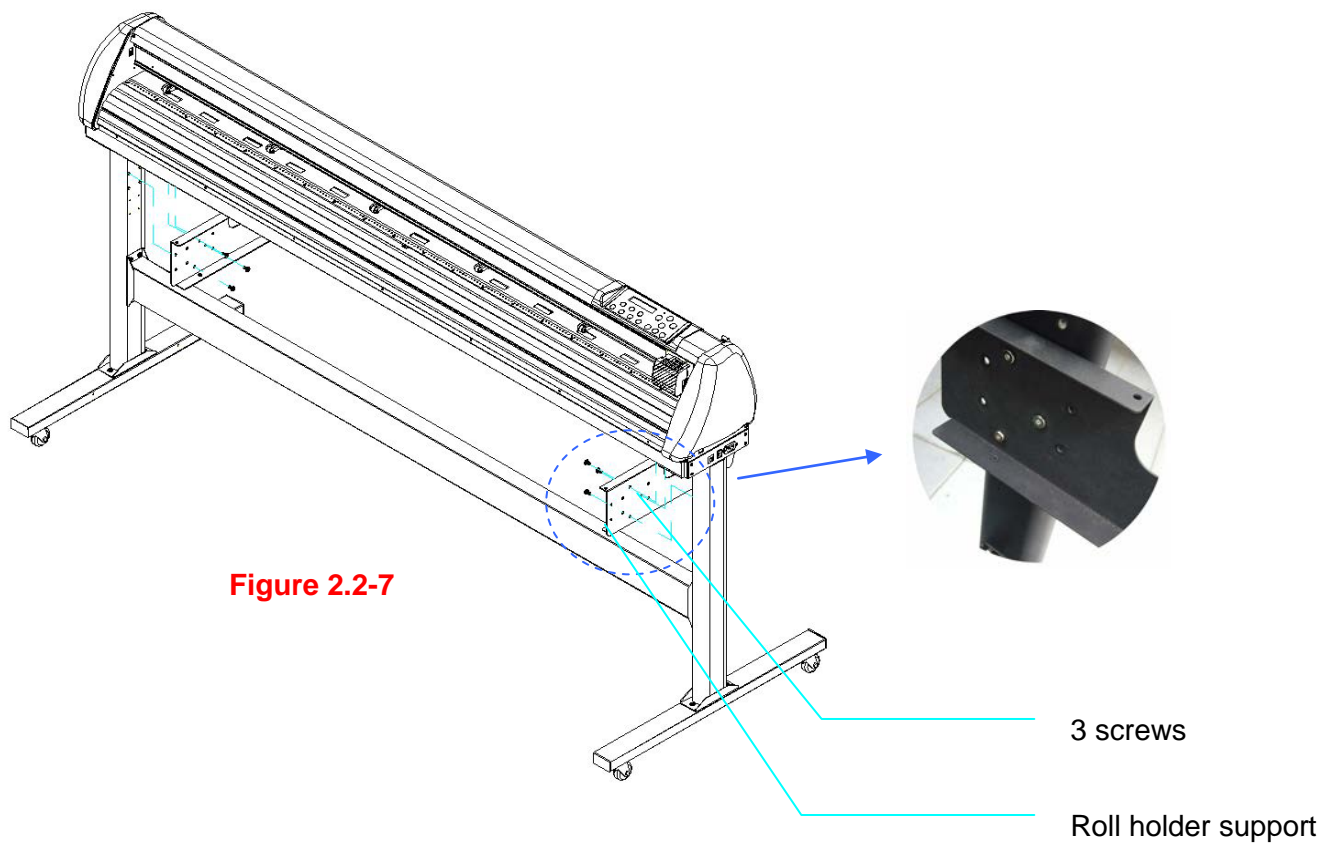
Step 7

Place the roll holder 1 onto the roll holder support (Figure 2.2-8).

Roll holder 2

Roll holder support
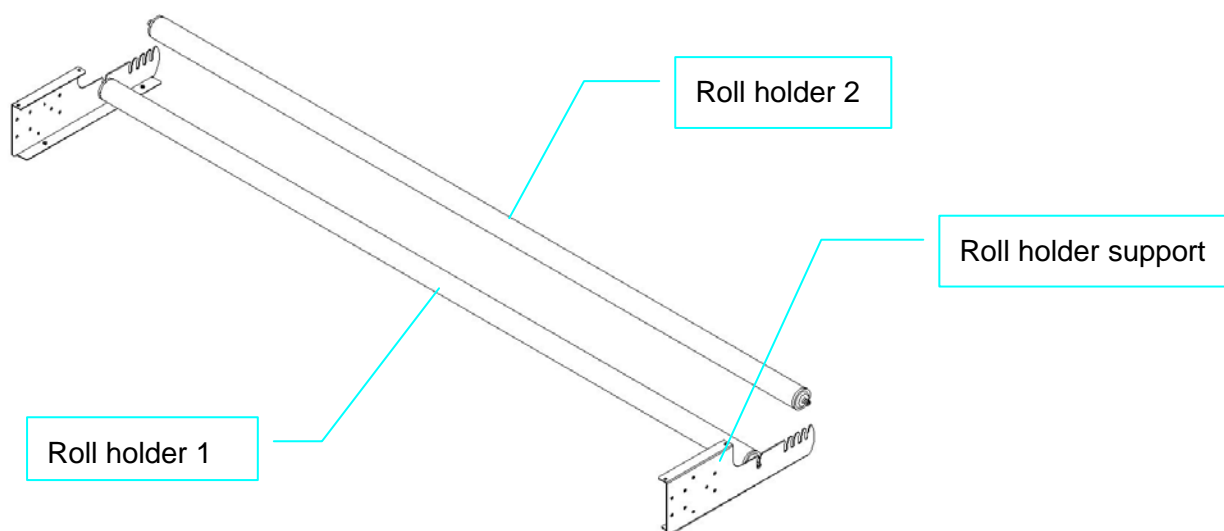
Roll holder 1

Figure 2.2-8

Step 8

Turn the screw counter-clockwisely for around three times after unpacking roll holder 2 (Figure 2.2-9).

Figure 2.2-9

Step 9

Insert the end of the roll holder without the damper into the left roll holder support and then insert the end of the roll holder with the damper into the right roll holder support. Ensure the white protrusion is wedged in the groove (Figure 2.2-10).

Figure 2.2-10

Step 10

Tighten the screw on the damper until it is securely attached to the right roll holder support (Figure 2.2-11).
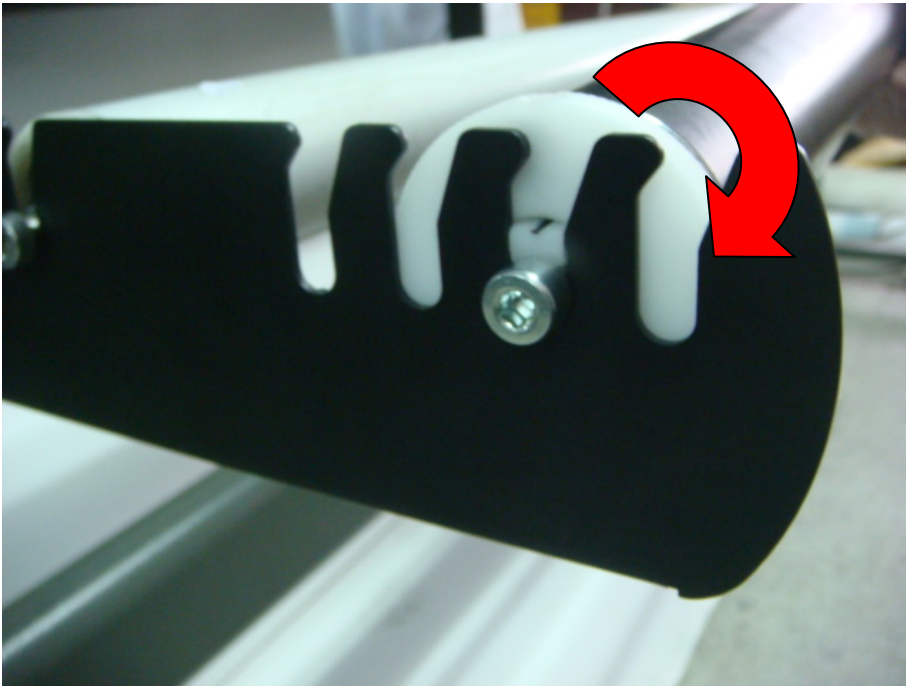
Figure 2.2-11

Step 11

Lastly, the complete picture will be shown like below. (Figure 2.2-12)
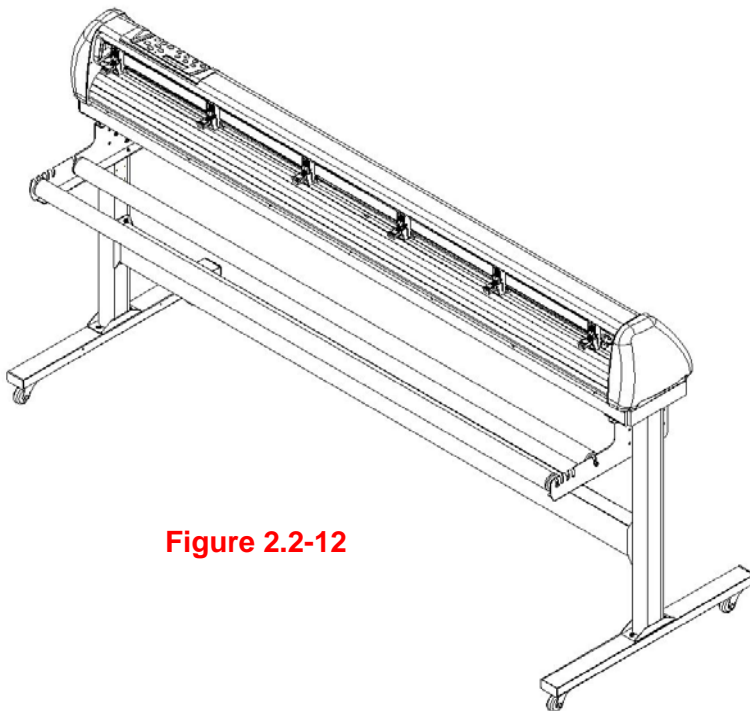
Figure 2.2-12

Step 12

Please refer to user manual section 4.1 to learn how to load the roll media.

2.3 USB Cable Tie and Saddle

The USB cable tie and saddle assembly for the stands with Flexible Media Support System only.

Step 1 Insert the cable tie into the upper hole of cable saddle from bottom to top.
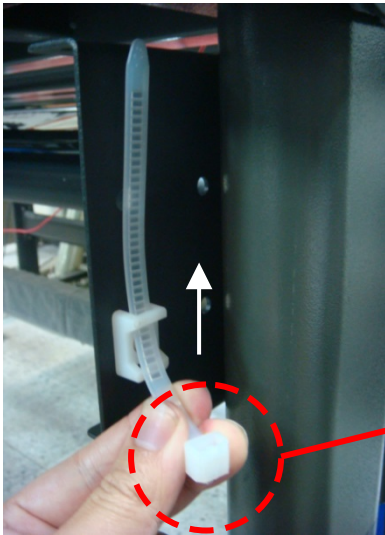
This side up

Step 2 Place the USB cable into the cable tie and tighten the cable tie.

Step 3 Insert the cable tie end into the lower hole of cable saddle to finish the job.

Untied way: pull out the cable tie→ pull up the pin→ release the cable tie.
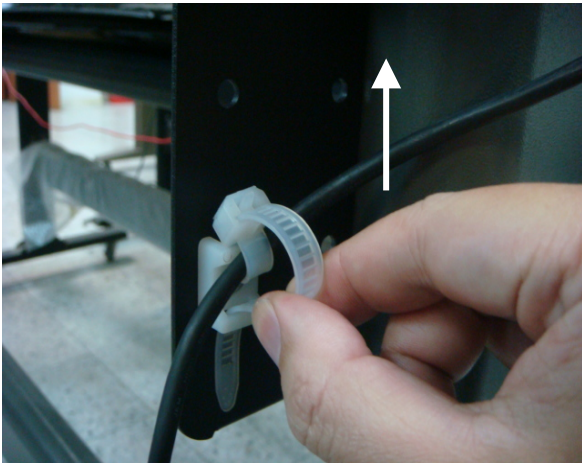
Pull out the cable tie
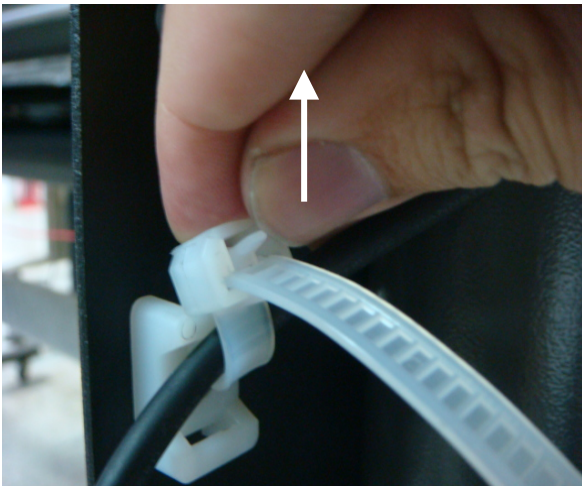
Pull up the pin

Release the cable tie

2.4 Desktop Flexible Media Support System [For BREN 724 Razor]

Step 1

Please examine the following items in stand carton's accessory box:

- 1 set of Roll Media Flange (2 pieces)
- 1 set of Roll Holder (2 pieces)
- 1 set of Roll Holder Guide Bushes (4 pieces)
- 1 set of Roll Holder Support (2 pieces)
- 1 set of Desktop Support Bracket (2 pieces)
- 4 pieces of Plastic Foot
- 4 pieces of M4 screws
- 12 pieces of M6 screws
- 1 piece of M4 L-shape hexagon screw driver
- 1 piece of M5 L-shape hexagon screw driver
- 1 piece of M6 L-shape hexagon screw driver (for adjusting the screws of Roll Holders)
- 1 piece of Installation Guide for Roll Holder

Step 2

Put the 4 Plastic Foot under the Roll Holder Support and insert the M4 screw into the hole of Plastic Foot and tighten them with the M4 L-shape screw driver. (Figure 2.3-1)

Roll Holder Support

M4 screws

Plastic

Figure 2.3-1

Figure 2.3-2

Roll Holder Support

M6 screws

Desktop Support Brackets

M6 screws
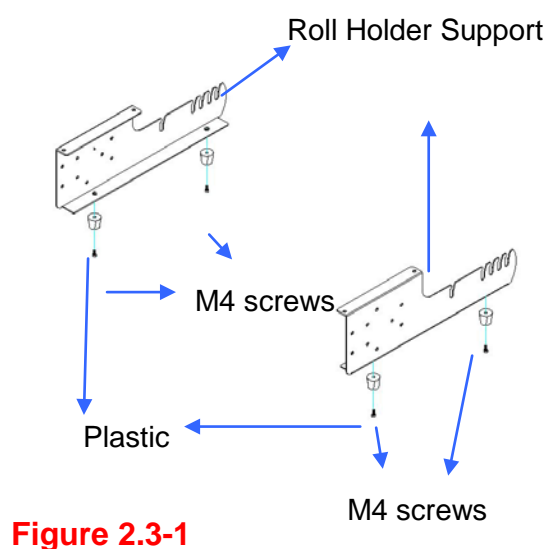
Roll Holder Support
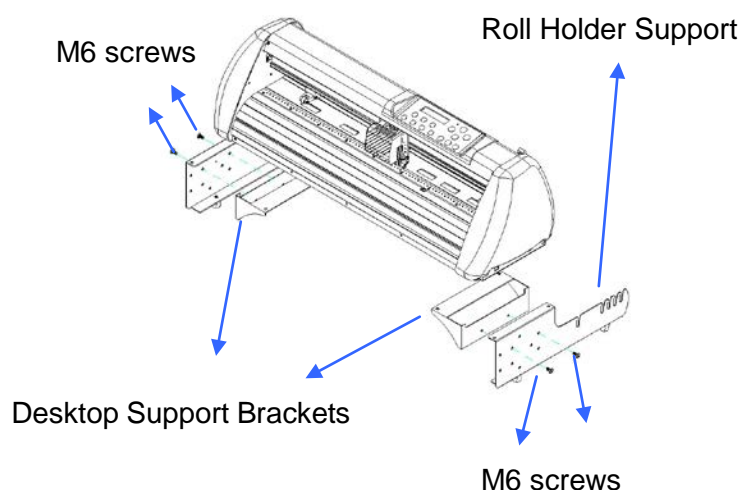
M4 screws

Step 3   Position the Desktop Support Brackets beside the Roll Holder Support and insert M6 screws into the Roll Holder Support and tighten them with M6 L-shape screw driver. (Refer to Figure 2.3-2).

Step 4

Put the bottom of machine in lateral, and position the Roll Holder Assembly beside the bottom of the machine. Then, insert the M6 screws into the holes of Roll Holder support assembly and tighten them with M6 L-shape screwdriver. Like Figure 2.3-3.

M6 screws

Screw holes

Roll Holder Assembly
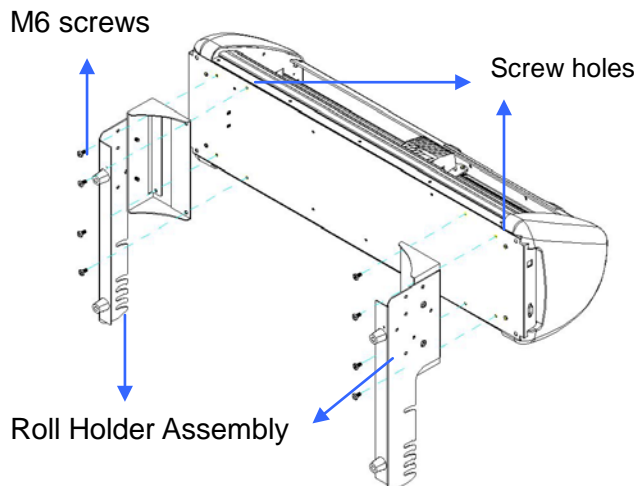
Figure 2.3-3
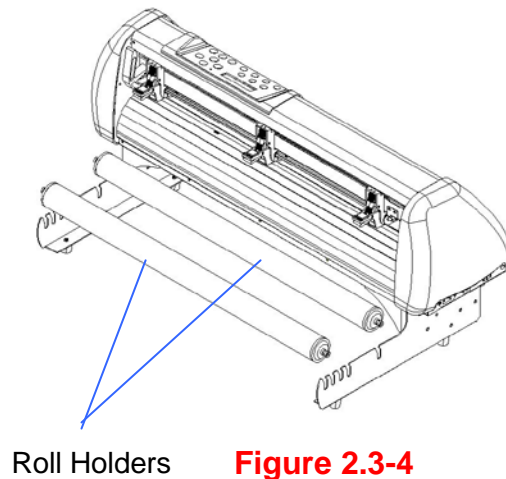
Roll Holders   **Figure 2.3-4**

Step 5

Place the two roll holders into the holes of Roll Holder Support (Figure 2.3-4). To install the roll holder with damper, please refer to chapter 2.2, step 8 to step 10.

Step 6

The complete Desktop Media Support System will be shown as in Figure 2.3-5.
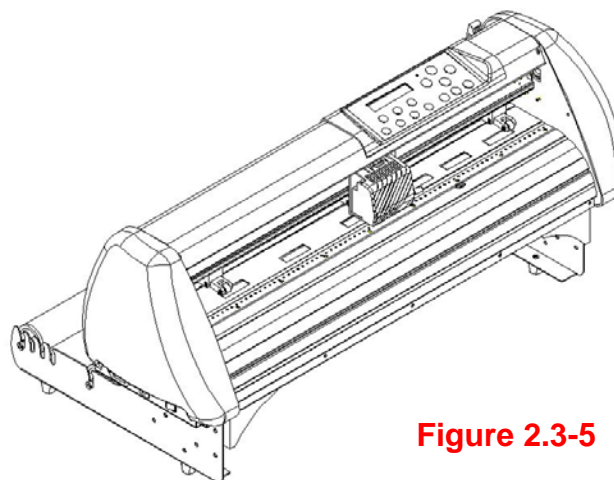
Figure 2.3-5

2.5 Instruction of Damper Roller

Turn the wheel as instructed below to adjust damping. The bigger the number is, the stronger the damping. The volume symbol sticker indicates the damping level (Figure 2.3-6, 2.3-7).
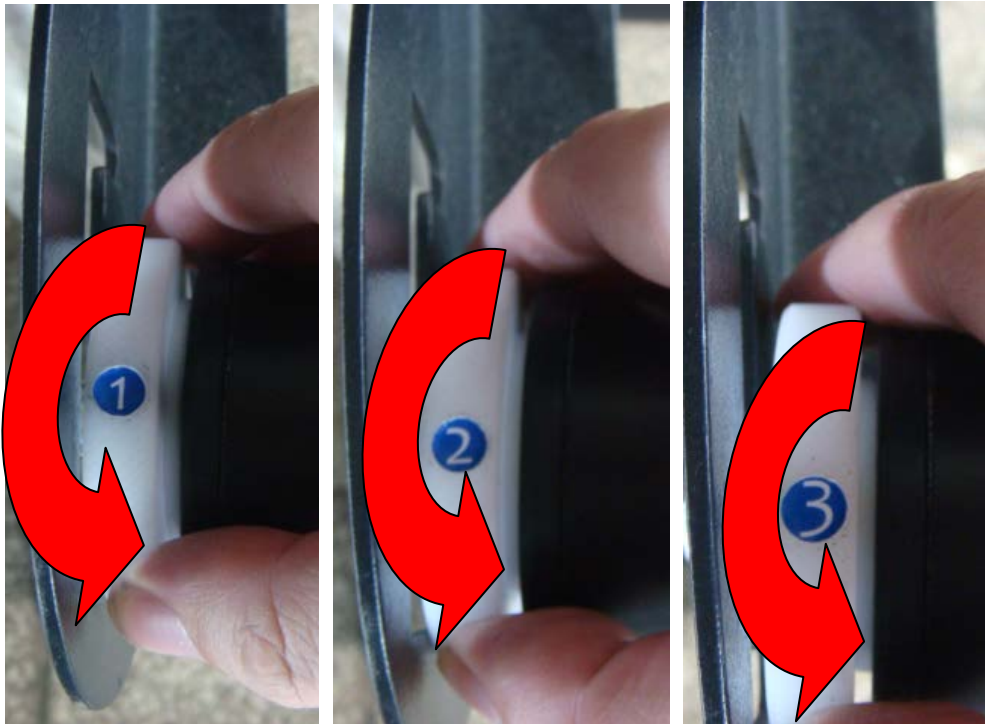
Figure 2.3-6

Figure 2.3-7

2.6   Blade Installation

Incorrect blade extension is the leading cause of cutting issues. The general rule is that the blade should not be extended (sticking out from the blade holder) more than the thickness of a credit-card. By having too much extension on your blade, you will ruin your cutting strip, by causing scratches and gauges in the strip, which will then lead to uneven cutting, as well as many other cutting issues. Even worse, incorrect blade extension will cause "drag" on the cutting-head motor; this will cause motor failure, which is not covered under warranty.

If, however, the blade is not extended ENOUGH, it will not be able to completely cut through the material. Knowing the CORRECT amount of extension for your cutter and material is vital to optimal cutting. See the diagram below, which shows how the blade holder works, as well as the correct extension for the blade. Always use the TEST CUT function on your cutter (F4 on 700 Series) PRIOR to sending a job from your computer. This will allow you to test your extension and force setting, as well as to make adjustments, and perform several more test cuts, without wasting material.

Note: To extend the blade from the holder - looking down onto the holder, turn it clockwise; to decrease the extension length, turn counter-clockwise.

Optimal blade extension is less than the thickness of the material and backing combined.
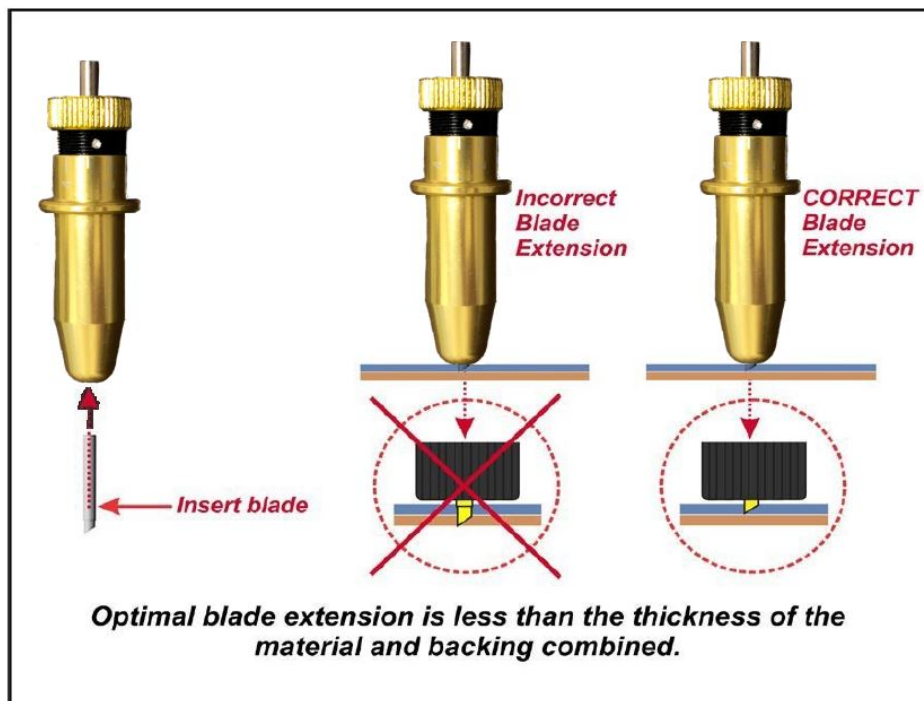
Step 4

Insert the blade holder into tool carriage. Please note the outward ring of the holder must put into the grooves of carriage firmly

NOTICE!

Before beginning first cut, adjust blade depth properly.
Improper blade extension WILL CAUSE DAMAGE
to the cutting strip, blade, and blade holder!
These items are not coverd under the warranty!

Adjusting the Blade Length (Depth of Cut):

1. To **INCREASE** the amount of blade extension, turn the cap in a clockwise direction. Screw in toward holder body.
DO NOT SCREW CAP ALL THE WAY DOWN.

2. To **REDUCE** the amount of blade extension, turn the cap in a counter-clockwise direction. Screw out away from holder body.

Push Pin

Blade

Collar

Face Stock

Backing
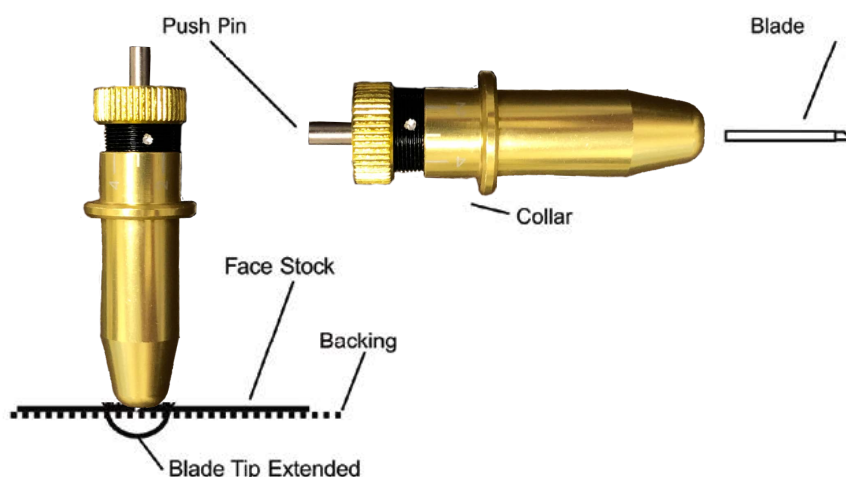
Blade Tip Extended

Obtaining Correct Blade Extension

Check material chart for corre
rt with blade tip ___ quare should pull out leaving a
the cut test option (F4/Test). quare should pull out leaving a
triangle. Backing should have a slight score mark, but not a cι
line. If square did not cut, remove blade holder and
increase blade extension. Replace blade holder and test
again. If backing is cut, reduce blade extension, making
small adjustments at a time. **Refer to Quick Start Guide
or Manual for instructions for CUT TEST.**

Correct Blade Holder Placement

Collar in Sleeve

Collar above Sleeve

Correct

Incorrect
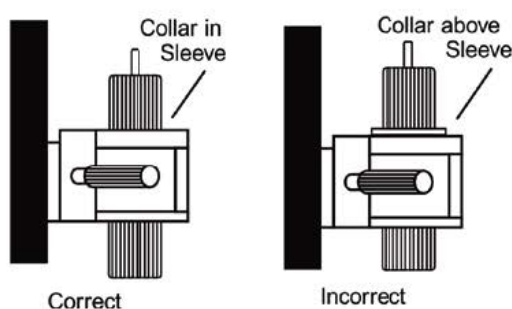
2.7   Cable Connection

The cutting plotter communicates with a computer through a **USB (Universal Serial Bus)**, a **Serial port (RS-232C)** or **Ethernet**. This chapter shows you how to connect the cutting plotter to a host computer and how to set up the computer/cutting plotter interconnection.

!! **Notice:** When USB connection is enabled, serial port will be disabled automatically.

Serial Interface Connector (RS232C) – used to connect the cutting plotter to a computer through a serial interface cable.

Figure 2-25

Ethernet Connector– used to connect your computer to a local area network.

USB Connector – used to connect the cutting plotter to a computer through a USB cable.
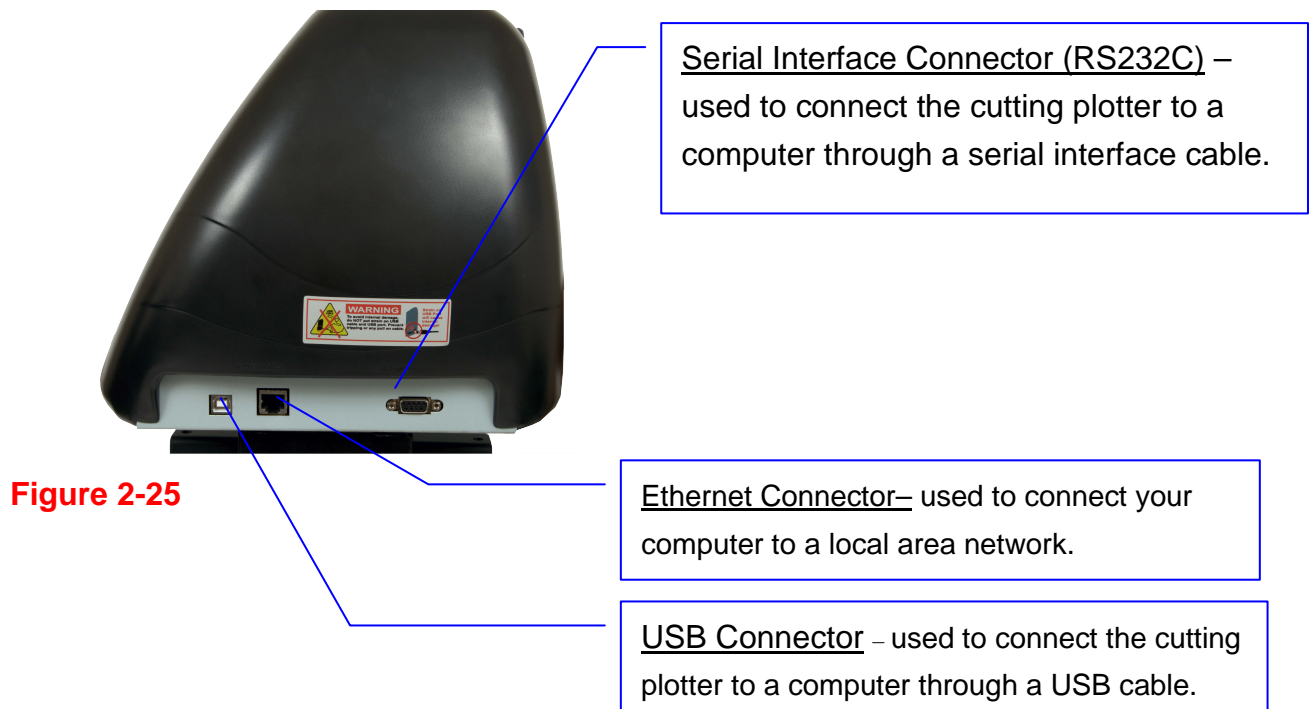
2.7.1   USB Interface
BREN 700-Series Razor build-in USB interface are based on the Universal Serial Bus Specifications Revision 2.0 (Full Speed).

2.7.2 Connecting your BREN 700-Series Razor cutter
1. Turn on the machine.
2. Connect the USB connector to the machine and then start the BREN driver installation process.

WINDOWS WILL DETECT USB AUTOMATICALLY BUT CUTTER WILL NOT BE ABLE TO BE USED UNTIL DRIVER IS INSTALLED CORRECTLY!!!

2.8. Installing the driver for USB connection.

1. Insert the BREN INSTALLATION CD that was included with your BREN 700-Series cutter and select 'BREN Razor 700-Series Installation' when the disc starts.

2. On the following screen, you will have the option to install the 32 or 64-bit version of the Windows driver for your BREN Razor. If you do not know which version you are currently running, see section 3b on the next page. **NOTE: Windows will generally not allow you to install the version that isn't compatible with your system.**

Once you've verified which version you're running, select the appropriate option or you can select "Download Drivers Online' to get the most up-to-date version of the driver.

3. If you selected the "Download Drivers Online" option your default web browser should open and take you to bren.winline.com Once you're at the site, select the download option.

WinLINE Version 8 BREN OEM Edition

Windows system printer driver for BREN cutters.

Download

Technical Support

Frequently Asked Questions

BREN Web Site
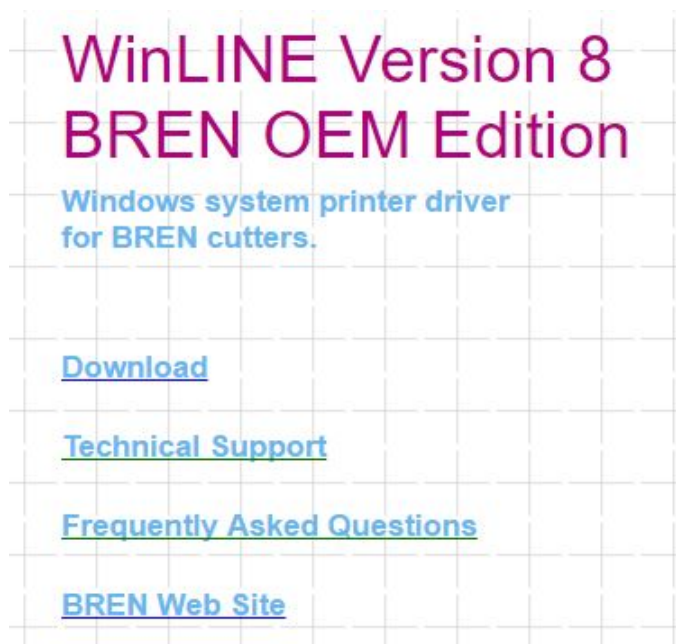
3b. On the following screen, select either the 32 or 64-bit version of the driver to download depending on what version of Windows you are running. If you aren't sure, you can open your start menu and right click "This PC" or "My Computer", right click and select properties. The version of Windows you are running should be displayed.

View basic information about your computer

Windows edition

Windows 10 Home

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System

Processor:	Intel(R) Core(TM) i5-4570R CPU @ 2.70GHz 2.70 GHz
Installed memory (RAM):	8.00 GB
System type:	64-bit Operating System, x64-based processor
Pen and Touch:	No Pen or Touch Input is available for this Display

4. Once the Welcome screen is displayed, select "Next" to continue to the 'License Agreement' screen. You must select "I Agree" to continue the driver installation process.

If you do not agree to the terms displayed you can select "Back" or "Cancel" to stop the installation process.
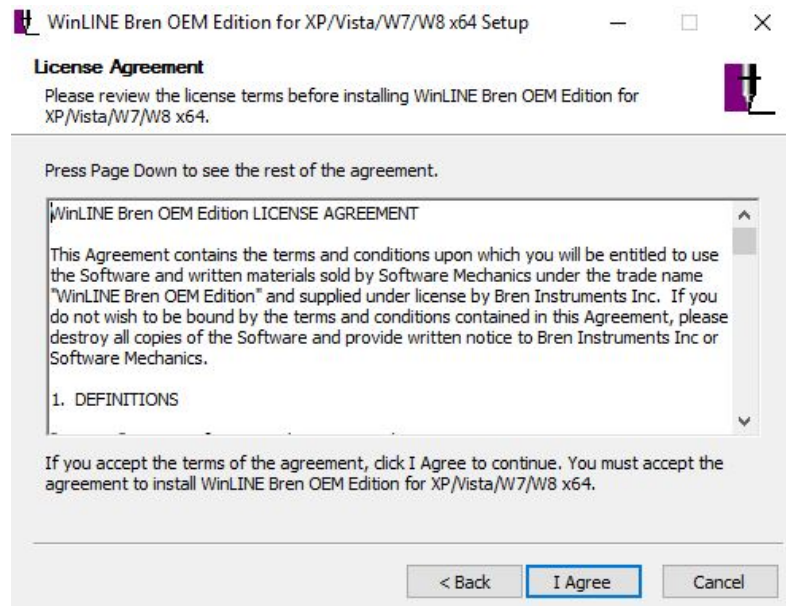
5.   The Choose Install Location screen will let you chose where you want the software to be installed on your PC. It will default to C:\Program Files (x86)\WinLINE Bren OEM Edition\ unless you set a new location for the driver to be installed. Once you've decided where to install the software, select "Next" to continue.
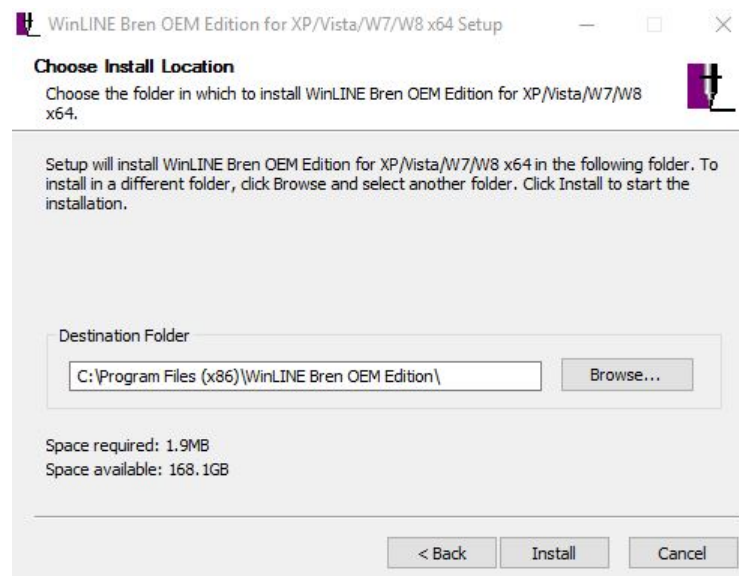
6.   Once the driver had been downloaded to your PC, the Installation Wizard will begin. Select "Next" on the Installation screen to continue the setup process or "Cancel" to exit.

7. Following the instructions on screen, verify your BREN 700-Series Razor cutter is connected to your PC via USB.

The Windows Auto-Play feature may ask if you want it to install the driver; select "Not this time." Allowing the Windows Auto-Play to install the driver will result in a FAILED installation. To successfully install and activate the driver, you MUST use the WinLINE Installation Wizard.

Once the cutter is connected to your PC via USB, click the box next to "The printer IS plugged in." and then select "Next" to continue.

8.   On the following screen, enter your BREN 700-Series Razor serial number which is located below the power switch and also on the Technical Support sticker to the right of the keypad on your BREN cutter. Enter your serial number and select "Next" to continue.
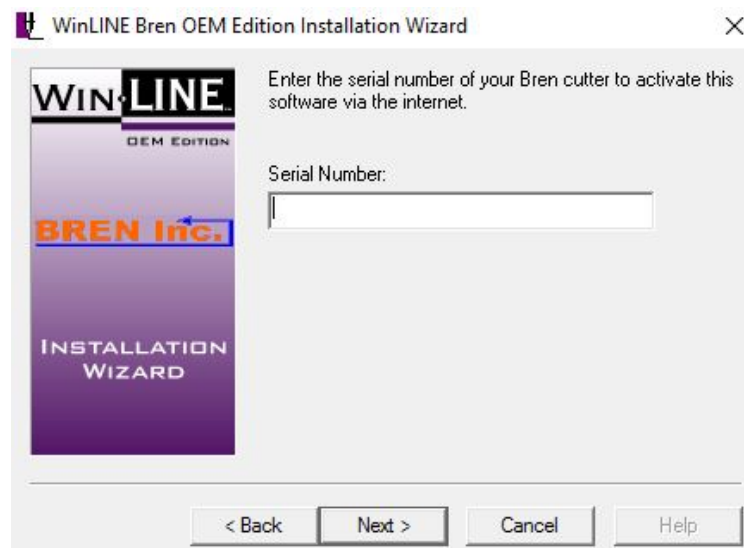
9. That next screen will ask you to verify the manufacturer which will default to Bren Instruments. For the model, select BREN 724, 740 or 752 depending on which model you are installing.
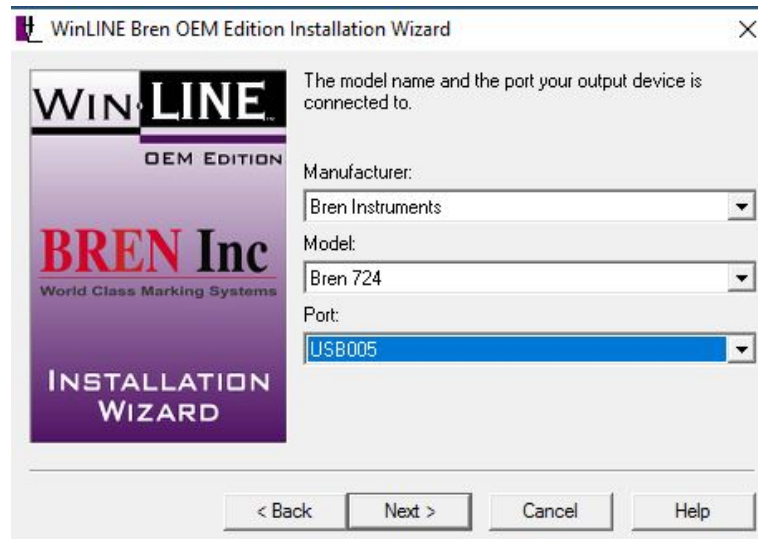
It is important to select the correct model number as the driver will set the cut widths for the corresponding cutter. For example, if you set a BREN 752 up as a 724 on your PC, you will only be able to cut up to 24 inches instead of the 52 the cutter is capable of and the driver will need to be uninstalled and reinstalled verifying the correct model.

10. The next screen will ask you to name your Cutter. It will default to whichever model you selected in the previous step and will display in "Devices and Printers" under that name. The printer name can be changed but is not recommended.
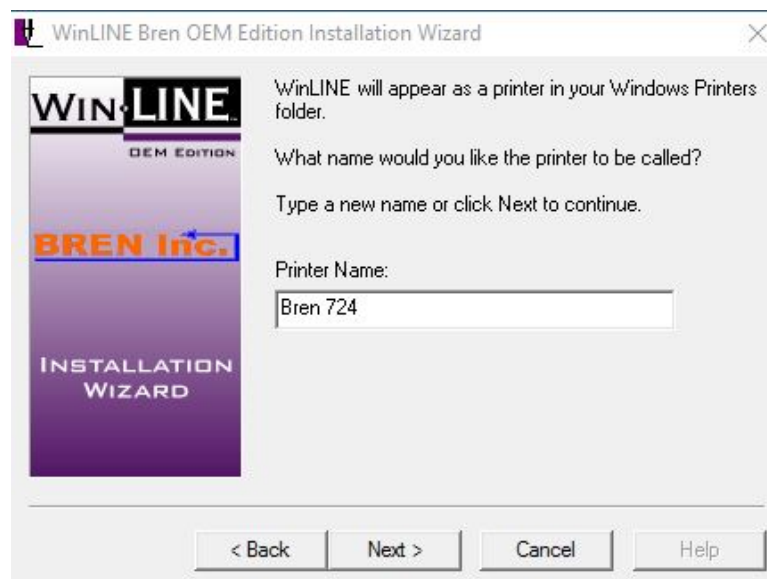
11. The next screen will ask If you would like to activate the software now or later. If you select "Activate the software via the internet now", select "Finish" to complete driver installation and restart your computer.
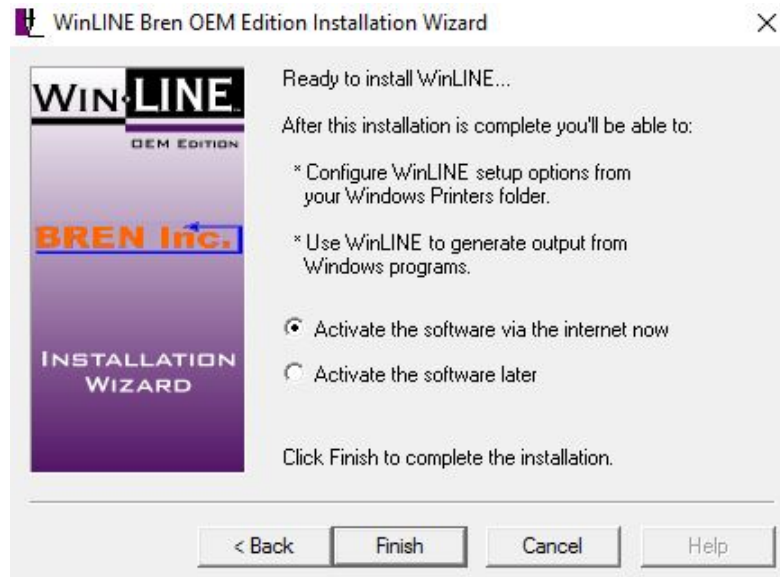
If you do not have internet access or get an error message when attempting to activate the software, contact BREN technical support at (800) 826-3991 or info@breninc.com.

2.8.1 RS-232 Serial Interface
■   Connecting to the RS-232 (Serial) Port

1. For IBM PC, PS/2 users or compatibles, connect the RS-232C cable to the serial connector of the assigned serial port (COM1 or COM2) of your host computer.

2. Set up the communication parameters (Baud Rate and Data Bits/Parity) to match the setting of software.

   Caution!! Please turn off the BREN 700-Series Razor cutter before plugging the RS-232C cable.

2.9 Connecting BREN 700-Series via Network/Ethernet

1. Connect the BREN 700-Series Razor to an open and working Ethernet port using the Ethernet cable included with your device.
2. Load material into the BREN cutter and press the "Out/Edge" key to size the media.
3. Press the "On/Offline" key on your BREN keypad.
4. Press the F1 key and scroll right until you see DHCP and press the Enter key.
5. DHCP option should show disabled. Press the Enter key again to enable it.
6. After the DHCP is enabled, your display screen should show an IP address. Write the IP address down and press the 'ON/Offline" key twice until you get back to main display screen.
7. Make sure your display screen shows the length and width of your loaded media to ensure it's ready to cut.
8. In Windows, open the Control Panel and select "View Devices and Printers".

9. At the top of the Devices and Printers screen, select "Add a Printer".
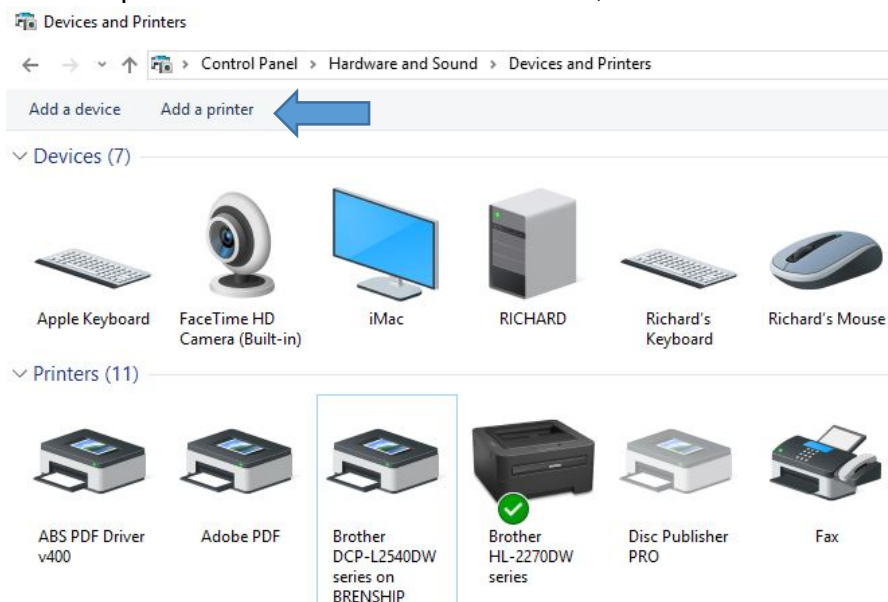
10. When the "Add a Device" screen is displayed, select "The printer I want isn't listed."
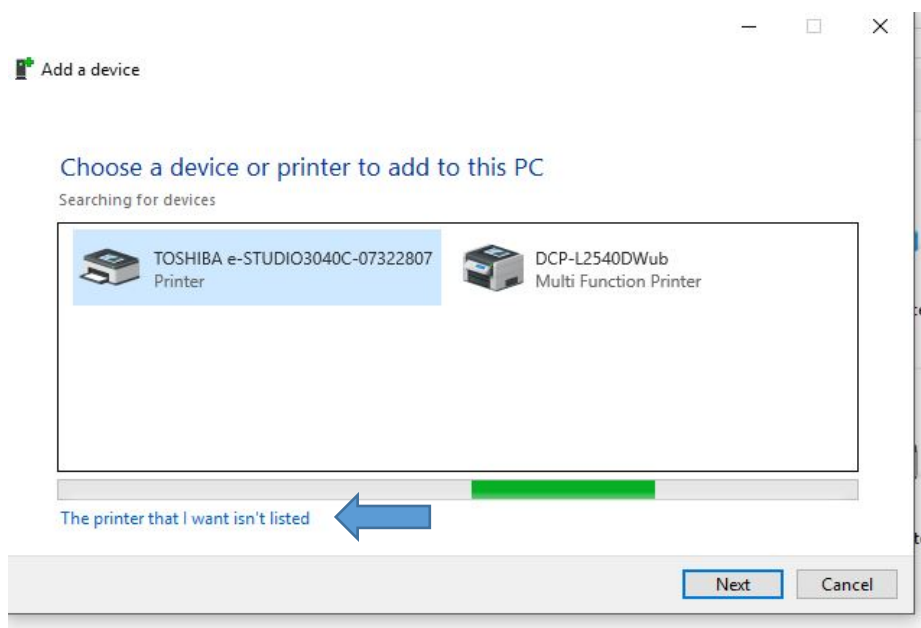
11. When the "Find a printer by other options" screen is displayed, select "Add a printer using a TCP/IP address or hostname" and select "Next".
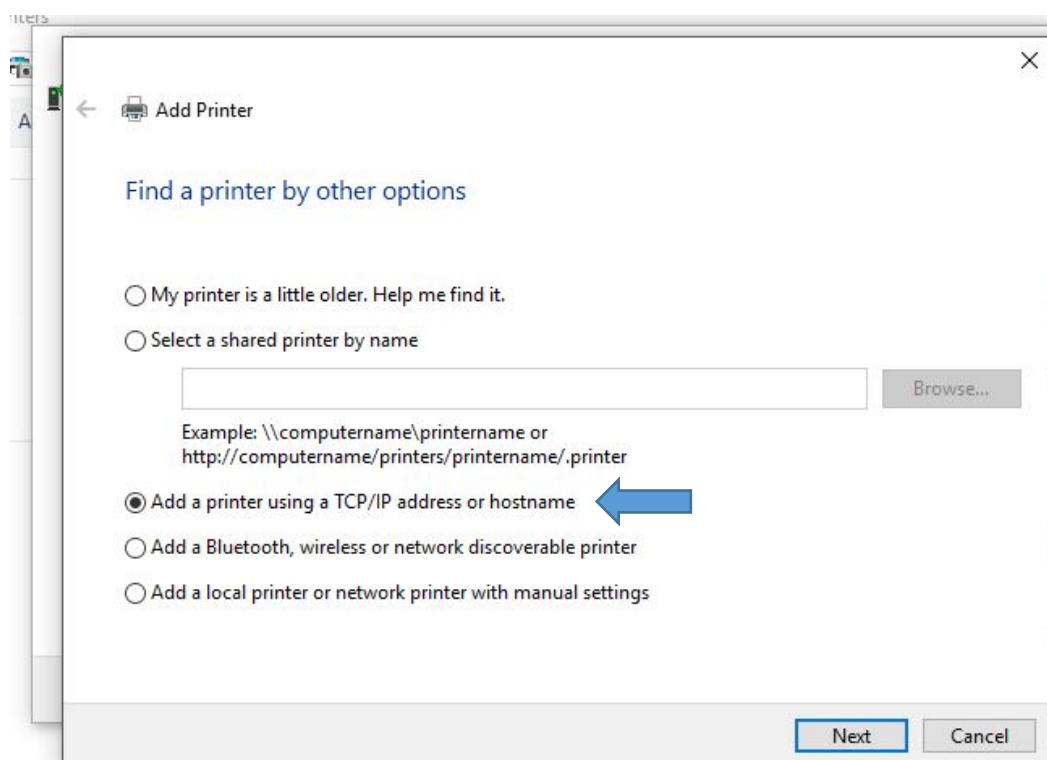
12. When the "Type a printer hostname or IP address" screen is displayed, for "Device Type" select "TCP/IP" address and in the empty area next to "Hostname or IP address"enter the IP address from your BREN 700-Series that was displayed on your screen when you enabled DHCP. The same address or a variation of it that may add a number or character to the end of the port will be listed in the "Port Name" field as you're entering the IP address. Select "Next" to continue.
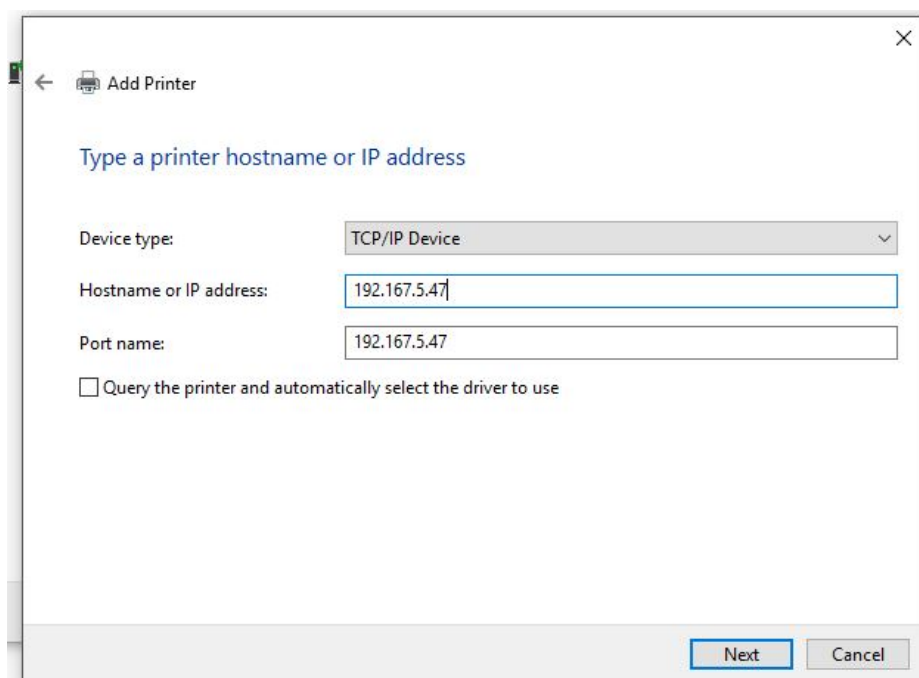
13. Windows will now detect the TCP/IP port.
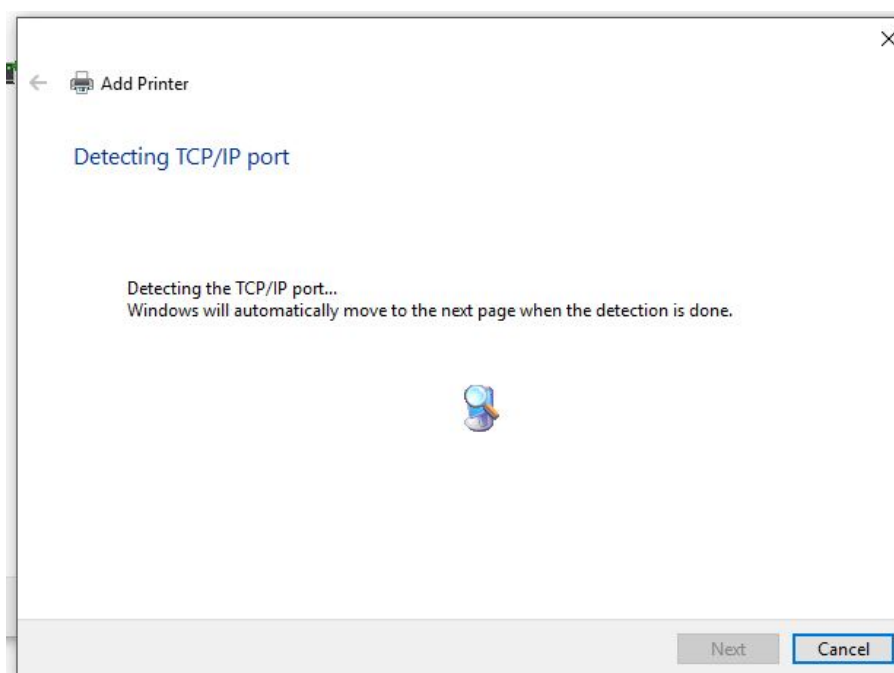
14. Once Windows displays the "Additional port information required" screen is displayed, you can select "Cancel" at the bottom of the screen to exit the process. If the "Add a Printer" screen is displayed after you select "Cancel", you can select "Cancel" again to exit the process.
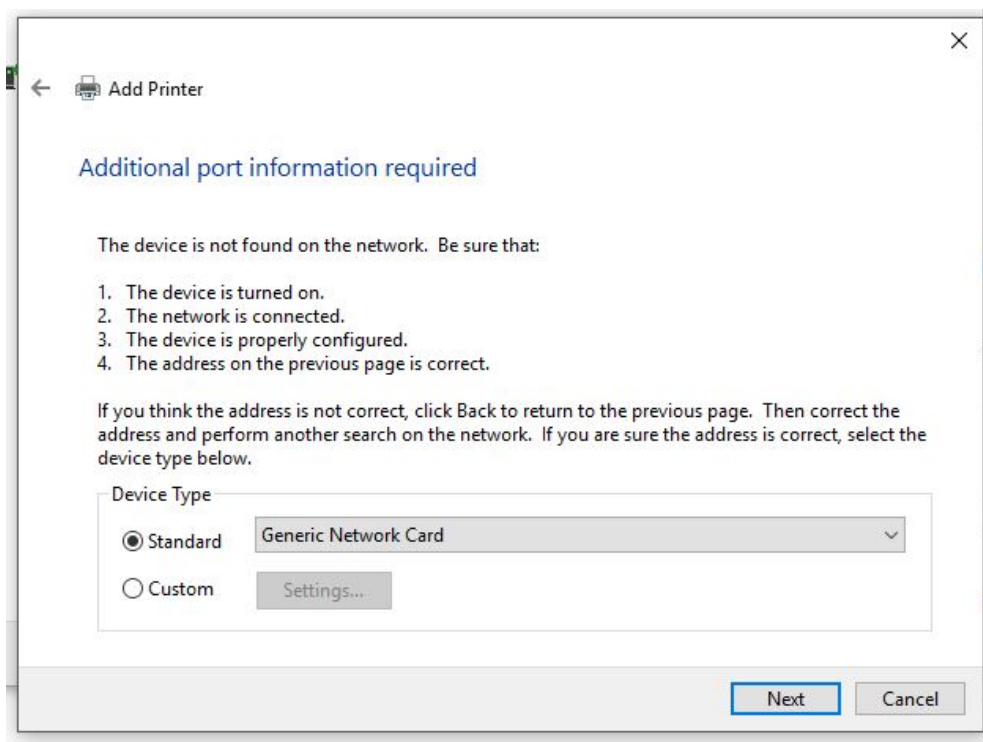
15. Now that the network port is created, follow the standard steps to install the BREN driver via the software CD included with your cutter or visit BREN.Winline.com to download the driver.

16. In the driver installation wizard, be sure to check "The Printer Is Plugged In".
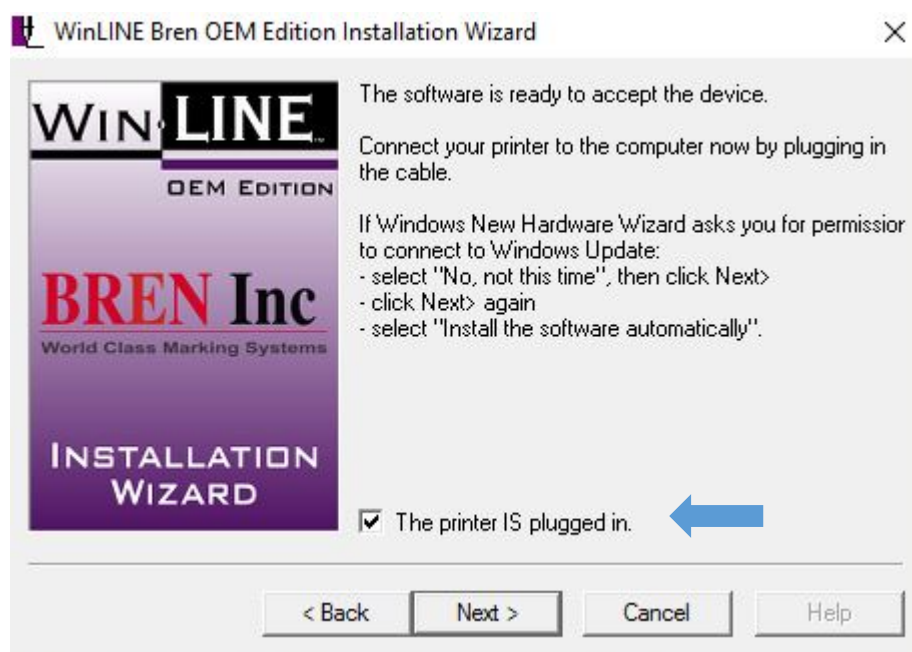
displayed on your BREN cutter when the DHCP was enable and was configured in the "Hostname or IP address"setup in windows.
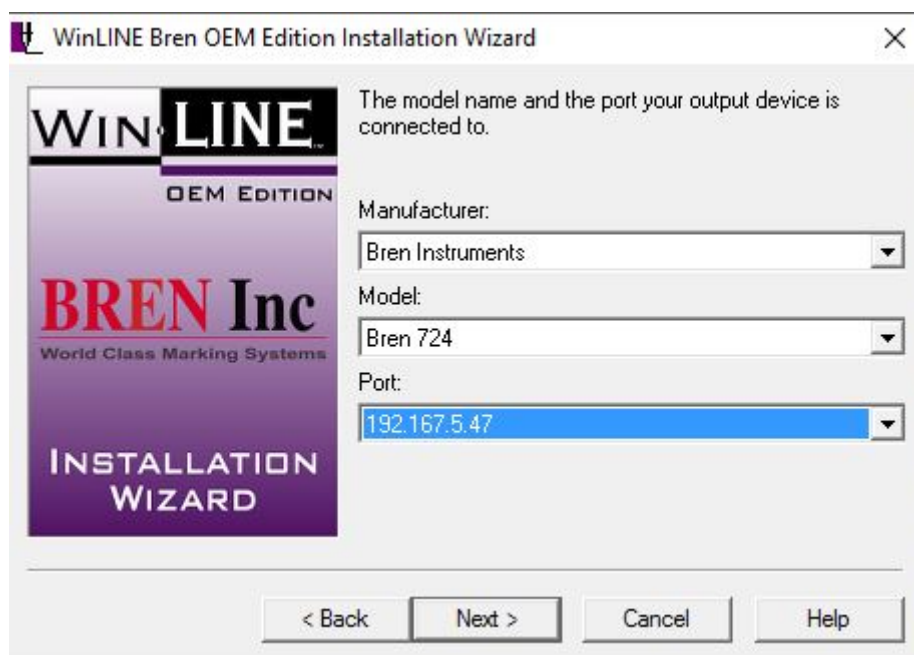
18. Complete the setup process and reboot your computer.
19. After your computer restarts, go to "Devices and Printers" and verify your BREN 724/740 or 752 is displayed and is not grayed out.
20. Right click on the BREN cutter and select "Printer Properties".
21. Select the "Ports" tab and ensure that the BREN cutter is set to the IP address that was listed after the DHCP was enabled and that was configured in the "Hostname and IP address" setup process.
22. If your BREN cutter will not print, check the steps and verify the IP address was recorded correctly and verify with your IT department nothing on your network is blocking the device from communicating with your device on the network.
23. Port setup and driver installation will have to be done on each computer that you want to network to the BREN cutter.
24. **If the print driver has already been installed as a standalone on a computer using USB to communicate with the BREN Cutter, follow steps 8-14 to create the port using the IP address displayed once the DHCP was enabled on the BREN Cutter.**
25. After the port has been created, in 'Devices and Printer" right click on the BREN 724/740 or 752 and select the ports tab. Change the current port option to the IP address you configured in the previous step and select "Apply" and then "OK".
26. Verify the port has changed from the previous setting to the IP address that was previously configured.
27. Your BREN 700-Series Razor cutter is now ready to print over your network.

2.10 BREN 700-Series Razor Defaults

After you have finished the installation and re-booted your computer, you will need to set the driver defaults for your BREN cutter.

1. Open the printer driver: select START, then Printers and Faxes/Devices. Locate the icon for your BREN cutter and right-click. From this menu select Printer Properties.

2. Choose the About/Help tab and verify that your serial number appears and is correct. This indicates that you successfully activated the driver software. Select OK and close the window. Note: If you see the word "Evaluation" next to Serial Number, your activation failed and you will need to try again, or contact technical support at BREN.
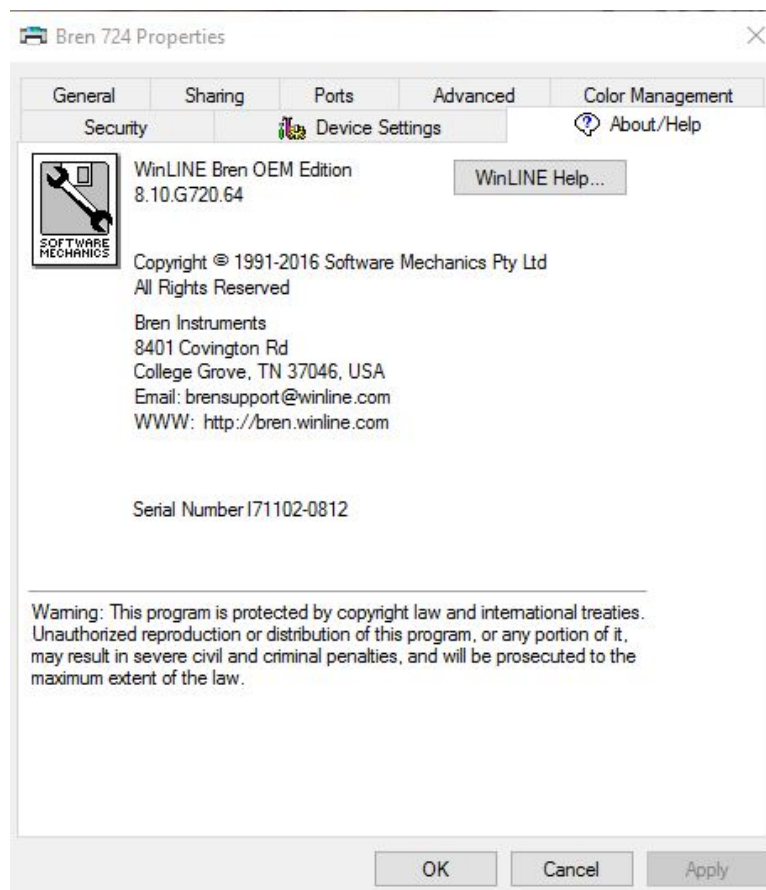
3. Once you have verified that your serial number was successfully activated, right click and select "Set as Default Printer" if not already set as default.

4.   Right-click again on the BREN Pro printer icon and select Printing Preferences. The items you set here (Setup tab) will become the "default" settings in your cutting application. You can specify a starting page size (i.e. 5" w x 10" l), unit of measure (change to inches), resolution (change to high), and media handling method (Feed Cut Extent Only). This will establish the initial page settings for your BREN 700-Series Razor. You can change the settings as needed, per job, once you are in any application you are using to send a cut job to your BREN cutter.

Note: *Refer to your Operation Manual for more information on printing preferences. If the default setting changes you made do not appear when you open an application to use with your BREN cutter your computer is more than likely set up with Administrator Control. You will need to contact your Computer Administrator to change the default settings*
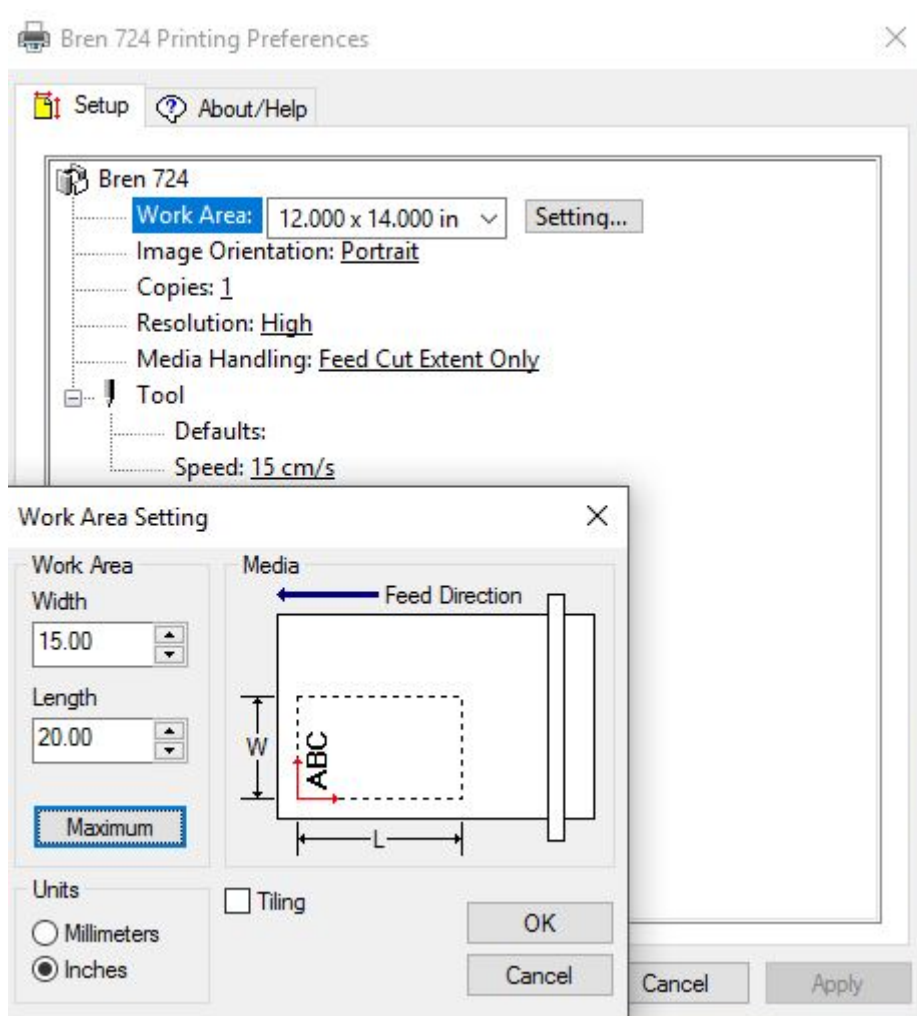
5. When using your cutter, you will need to "size the media (material)" to determine the cut width which is the measurement between the pinch rollers. Because the cutter needs to allow a margin for the pinch rollers, your cut width will be less than the actual width of your material. For example, if you are using 18" material, the left and right pinch rollers utilize at least ¾" on each side of the material, your cutting area will be approx. 16.5".

```
S 5.90F 2.82 0 0.010
L: 5905.5W: 16.8 T1E
```

BREN 700-Series Display

Once you size the media, look at the cutter display to find your cut width. In this scenario, it is essential that your page size NOT exceed 16.8" wide, or your file will fail to cut.

Chapter 3   The Control Panel

This chapter describes the button operations with the LCM menu flowcharts of the BREN 700-Series Razor When the cutting plotter is ready for use as described in Chapter 1 & 2, all functions are under default parameters.

3.1   The LCD Panel
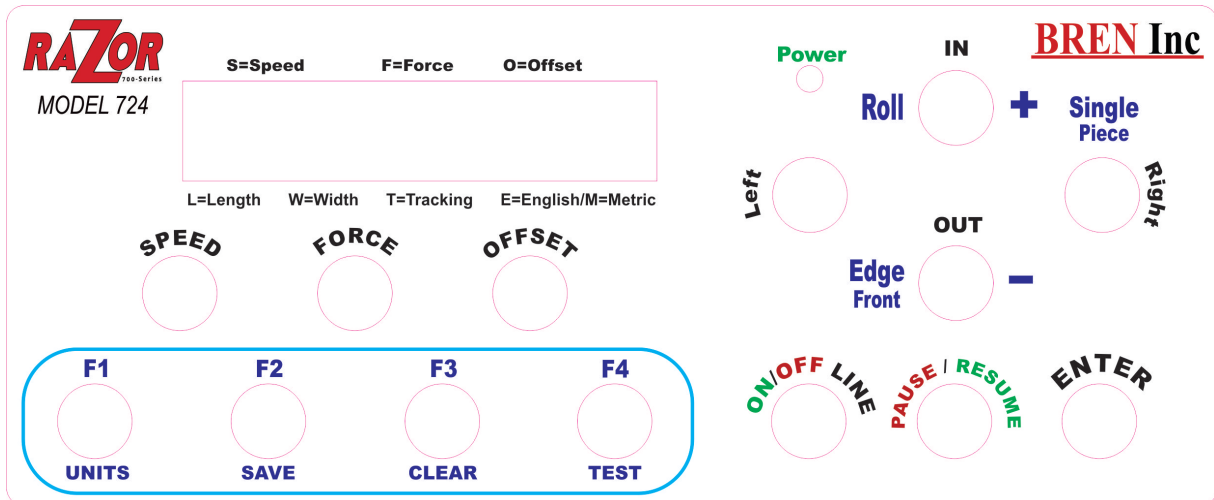
< LCD Control Panel on BREN 700-Series Razor>

Key	Function
LCD Screen	To display functions and error messages.
Power LED	To indicate the power status (light up: power on; light off: power off)
4 Arrow Keys	To move position, select function, or change setting.
ENTER	To set item or register the immediately preceding input value.
PAUSE/RESUME	To temporarily halt cutting process or to continue
ON/OFF LINE	To switch modes, stop cutting job, or abort changes of settings.
OFFSET	To adjust the value of blade's offset.
FORCE	To adjust the value of cutting force.
SPEED	To adjust the value of cutting speed and quality.
F4 TEST	To perform cutting tests on different media.
F3 CLEAR	To clear up buffer memory.
F2 Save	To select tools.
F1 Units	To set up functions.

Please see details in "3.4 Menu Items"

3.2   Menu in On-line Mode

Power On BREN 700-Series Razor in processing

```
┌─────────────────────────┐
│          BREN           │
│    LCM Version 2.01     │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│   FIRMWARE VER.  2.01   │
│    COPYRIGHT 2016       │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│  Place Media And Then   │
│  Lower Down The Lever   │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────────────────────┐
│  Roll       Edge       Single           │
│  △ Key    ▽ Key    ▷ Key              │  use △ ▽ ▷ to select
└─────────────────────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│  Sizing Media Width     │
│  Lever Up To Abort      │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│  Sizing Media Length    │
│  Lever Up To Abort      │
└─────────────────────────┘
```

Top menu

```
┌─────────────────────────────┐
│  S28.34 F 2.80 O 0.011 L:   │
│  984.2  W: 10.8  T1E        │
└─────────────────────────────┘
```

Sending data

```
┌─────────────────────────────┐
│  Pause   Setup   Resume     │
└─────────────────────────────┘
```

[PAUSE]

[FORCE]
```
┌──────────────────────────────┐
│  Force:80 gf              △   │
│             OK:ENTER      ▽   │
└──────────────────────────────┘
```
use △▽ to select; [ENTER] to enable the setting

[SPEED]
```
┌──────────────────────────────┐
│  Speed:          72 cm/s  △   │
│  Select:◁ ▷  OK:ENTER    ▽   │
└──────────────────────────────┘
```

[OFFSET]
```
┌──────────────────────────────┐
│  Offset: 0.275 mm         △   │
│              OK:ENTER     ▽   │
└──────────────────────────────┘
```

```
┌──────────────────────────────┐
│  Quality:        normal   △   │
│  Select:◁ ▷ OK:ENTER     ▽   │
└──────────────────────────────┘
```

[DATA CLEAR]
```
┌──────────────────────────────┐
│  Clear Data Memory           │
│  N:ONLINE      OK:ENTER      │
└──────────────────────────────┘
```

```
┌──────────────────────────────┐
│  Up Speed:       72 cm/s  △   │
│  Select:◁ ▷  OK:ENTER    ▽   │
└──────────────────────────────┘
```

[TOOL SELECT]
```
┌──────────────────────────────┐
│  1S:72    F:80   O:0.275 M △  │
│  Select:◁ ▷    OK:ENTER  ▽   │
└──────────────────────────────┘
```

```
┌──────────────────────────────┐
│  Up Accel.:      Medium   △   │
│  Select:◁ ▷ OK:ENTER     ▽   │
└──────────────────────────────┘
```

```
┌──────────────────────────────┐
│  Set Smoothing Cut           │
│  Select:◁ ▷    OK:ENTER     │
└──────────────────────────────┘
```

```
┌──────────────────────────────┐
│  OverCut:◁ ▷ 0.00mm      △   │
│  Select:◁ ▷    OK:ENTER  ▽   │
└──────────────────────────────┘
```

```
┌──────────────────────────────┐
│  Set Tangential Mode         │
│  Select:◁ ▷    OK:ENTER     │
└──────────────────────────────┘
```

```
┌──────────────────────────────┐
│  Pouncing        0 mm     △   │
│  Select:◁ ▷    OK:ENTER  ▽   │
└──────────────────────────────┘
```

3.3   Menu in Off-line Mode

Press [ON/OFF LINE] to switch to the offline mode

Offline For System Setup

[◁▷△ ▽]

◁▷△ ▽   move origin   M
X·   Y·

[SPEED]

Speed: 72 cm/s   △
Select:◁ ▷ OK:ENTER   ▽

Speed: 3~153 with an increment of 3(cm/s)

UP Speed: 72 cm/s   △
Select:◁ ▷ OK:ENTER   ▽

UP Speed: 3~153 with an increment of 3(cm/s)

Quality: Normal   △
Select:◁ ▷ OK:ENTER   ▽

Draft, Fair, Normal, Fine, Small Letter

Up Accel.:   Medium   △
Select:◁ ▷ OK:ENTER   ▽

High, Medium, Low

[FORCE]

Force:80 gf   △
            OK:ENTER   ▽

5~600 with an increment of 5(gram force)

[OFFSET]

Offset: 0.275 mm
            OK:ENTER

0.000~1.000 with an increment of 0.025(mm)

[DATA CLEAR]

Clear Data Memory
N:ONLINE   OK:ENTER

[CUT TEST]

Square Cut
Select:◁ ▷   OK:ENTER

Recut   #1   △
Select:◁ ▷   OK:ENTER   ▽

Recut number: 0-99

Redo Jobs in Memory
Select:◁ ▷   OK:ENTER

Copy   #1   △
Select:◁ ▷   OK:ENTER   ▽

Copy number: 1-999

Repeat AAS Job
Select:◁ ▷   OK:ENTER

After sending AAS job

Test Blade Holder
                OK: ENTER

Test Blade Length
                OK: ENTER

Blade Length Adjust
Select:◁ ▷   OK:ENTER

Set Length   0.00mm
Change: OK: ENTER

Turn CW   O Turn
N:ONLINE   OK: ENTER

Adjustment completes
                OK: ENTER

Ratio Setting
Select:◁ ▷   OK:ENTER

Ratio: 100%
Change:△▽   OK: ENTER

Ratio: 100%, 200%, 300%, 400%

Pattern Setting
Select:◁ ▷   OK:ENTER

Pattern: Arrow
Change:△▽ OK: ENTER

Pattern: Cross, Arrow

Offline For System Setup

[TOOL SELECT]

| 1S:72   F:80   O:0.275 M △ |
| Select:◁▷   OK:ENTER ▽ |

| Set Smoothing Cut |
| Select:◁▷ OK:ENTER |

| OverCut: 0.00mm   △ |
| Select:◁▷ OK:ENTER ▽ |

OverCut: 0.00~1.00mm with an increment of 0.05mm

| Set Tangential Mode |
| Select:◁▷ OK:ENTER |

| Pouncing   0 mm △ |
| Select:◁▷ OK:ENTER ▽ |

Pouncing: 0~200mm with an increment of 1mm

| Panel Setup |
| Select:◁▷ OK:ENTER |

| Factory Default ? |
| Select:◁▷ OK:ENTER |

[MISC]

| Auto Unrolled Media |
| Select:◁▷ OK:ENTER |

Enabled, Disabled

| Rear Paper Sensor |
| Select:◁▷ OK:ENTER |

Enabled, Disabled

| Vacuum |
| Select:◁▷ OK:ENTER |

Enabled, Disabled

| DHCP |
| Select:◁▷ OK:ENTER |

Enabled, Disabled

| IP Address |
| Select:◁▷ OK:ENTER |

IP Address set, Submask set, Gateway set

| MAC Address |
| 00:CF:52:72:03:01 |

| First Back To Origin |
| Select:◁▷ OK:ENTER |

Enabled, Disabled

| AAS Offset |
| Select:◁▷ OK:ENTER |

| Paper Saving Mode |
| Select:◁▷ OK:ENTER |

Both Expanded Mode, Length Expanded Mode, Width Expanded Mode, Both Unexpanded Mode,

| Set communication |
| Select:◁▷ OK:ENTER |

| Firmware   x.x.xx |
| FPGA: xx.xx |

| Select Language |
| Select:◁▷ OK:ENTER |

English, Francais, Türkce, Polski, Ingles, Japanese, Deutsch, Italian, Espanol

| Select Unit |
| Select:◁▷ OK:ENTER |

Metric (cm/g), Unit (inch/ g), Unit (cm/ oz), English (inch/ oz)

| Scale Length |
| Select:◁▷ OK:ENTER |

| Scale Width |
| Select:◁▷ OK:ENTER |

| Image Scale Length |
| Select:◁▷ OK:ENTER |

| Image Scale Width |
| Select:◁▷ OK:ENTER |

3.4   Menu Items

Below describes the functions of menu items

Menu or Key	Function	Setting	Default
--- Media sizing ---			
Roll	To measure media width.	Maximum Media Length 150 meters	
Edge	To measure media width and pull the media back till the front paper sensor open.	Maximum Media Length 150 meters	
Single	To measure media width and length.	Maximum Media Length 10 meters	
--- POWER ---			
	To indicate the power status.		
[Arrow Keys]			
	1. To move the tool carriage position on X or Y axis. 2. To select functions or change values of settings.		
[ENTER]			
	1. The displayed parameters will be saved automatically. 2. To set a new origin at the present tool carriage position. In "offline" mode, moving the tool carriage to desired position by [Arrow Keys], then press [ENTER] key to set a new origin. While moving with the parameters of XY-axes displayed, press [MISC] key will enable fine-tune movement; press [MISC] key again to disable the function.		
[PAUSE/RESUME]			
	To temporarily halt the cutting process. To resume the process by press [Pause/Resume] key again.		
[ONLINE/OFFLINE]			
	1. To switch between online mode and offline mode. 2. To stop the cutting job or abort the change of setting. Once press this key, the cutting job will be terminated immediately and cannot be resumed.		
[OFFSET]			
	To set or modify the distance between the blade tip and the center axis.	0.000~1.000mm	0.275mm
[FORCE]			
	To set or modify the value of tool force. For BREN 700-Series Razor, when the cutting force exceeds 450g, the maximum cutting speed would be 15cm/sec and the cutting quality would be Small Letter Mode (0.2g) and while the cutting force is 300g-449g, the maximum cutting speed would be 30 cm/sec and the cutting quality would be Fine Mode	5~600gram; 5 gram/per step	80 gram
[SPEED]			
Speed	To set or modify tool speed at horizontal moving.	3~153cm/sec; 3cm/sec per step	72cm/sec
Up Speed	To set or modify tool speed while the tool move from endpoint to next start point at horizontal moving.	3~153cm/sec; 3cm/sec per step	72cm/sec
Quality	To set or modify cutting quality. While cutting small letter, set as "Small letter". While cutting in high speed, set as "Draft". For normal operation, set as "Normal".	Draft, Fair, Normal, Fine, Small Letter	Normal

Up Accel.	To set or modify tool acceleration levels while the tool move from endpoint to next start point at horizontal moving.	High, Medium, Low	Medium
[F4 TEST]			
Square Cut	To perform a cutting test at present blade position. For more information, please refer to "4.3 Adjusting the Cutting Force and Offset" to adjust blade force and cutting speed.		
Redo Jobs in Memory	To redo the cut test jobs saved in memory by recutting or producing cut test copies. Recut number: 0 means limitless. If you want to set number as 0, you should set that between repowering the cutter and putting down the lever.	Recut (number of jobs: 0-99) Copy (number of jobs: 1-999)	Recut
Repeat AAS Job	To repeat AAS jobs automatically without having to operate on the computer side. Please be noted that this feature is mainly applied to the Single paper mode; please ensure a new piece of material you wish to apply this feature on is loaded and the origin repositioned to the first registration mark before starting. When the first AAS job repeat completes, the user will be offered the choice of "Repeat AAS Job Again", please press "Online/Offline" to return to the main menu. This option will appear after finishing reading all registration marks.		
Pattern Setting	To provide two patterns for cut test Note: It is recommended to select "Cross" if you are working on thick pieces of materials.	"Arrow" and "Cross" patterns	"Arrow" Note: the default pattern for Jaguar V_R is "Cross"
Ratio Setting	To adjust the size of the pattern	100%, 200%, 300%, 400%	100%
Blade Length Adjust	Please see 2.5 Automatic Blade Length Adjustment for further details. To adjust the length of the blade Note: 1. Keep your blade length as 0 before you start adjusting. 2. Test the blade holder first and then test the blade length by pressing ENTER. 3. Keep the blade holder at the same position when you perform blade holder and blade length tests. 4. When blade holder and blade length tests are finished, the screen will show you to what degree (the unit of the value following "CW" or "CCW" is "circle") and in which direction [CW (clockwise) or CCW (counterclockwise)] you should turn the adjustment knob. EG, Turn CW 0.5 is telling you that you should turn the knob for half a circle clockwisely. The value on the screen will be 0.0 when the blade length is perfect and no more adjustment needs to be made. You may start cutting at this point.	0.00mm-5.00mm	0.00mm
[F3 TEST]			
	To clear up buffer memory.		
[F2 SAVE]			
Set Smoothing Cut	To enable smooth-cutting function.		Enable

Over Cut	To generate an overcut to facilitate weeding.	0.00mm-1.00mm 0.05mm/per step	0.00mm
Set Tangential Mode	To enable the emulated tangential-cutting mode for thicker media types and small letter cuts. Note: while the Offset value setting at 0.000 mm, "Set Tangential Mode" will automatically be disabled.		Enable
Pouncing	To make perforated patterns. * In order to use this function, Pouncing tool must be installed. * Before start pouncing, place pouncing strip on top of the cutting pad to protect the cutting pad. * Set the value as 0 mm to disable the pouncing mode. * Pouncing tool is an optional item.	0~200mm	0mm
Panel Setup	Accept setup command: To accept commands of the Force, Speed, Cutting Quality, and Offset only via software.		Accept setup command
	Control panel only: To accept commands of the Force, Speed, Cutting Quality, and Offset only via control panel of the cutter.		
Factory Default	To turn all parameters of the menu items to factory-default settings.		
[F1 UNITS]			
Auto Unrolled Media	To avoid paper jam and motor crash by automatically unroll media (50cm and up) before cutting while enabled. . * Auto-unroll only effects on roll/edge media. * Using Single mode to size media will disable this function automatically. * If the length of the rolled media is less than 2 meters or the weight is light, it is recommended to set this mode disabled.		Enable
Rear Paper Sensor	To detect if the rear paper sensor is covered to determine the following process; when it is enabled, the cutter will detect if the material has covered the rear paper sensor under the Roll and Edge mode; when disabled, the rear paper sensor will not be functioning. Note: Rear paper sensor only functions under "Roll" and "Edge" mode.	Enable Disable	Enable
DHCP	Shows your IP address for TCP/IP Configuration		Disable
IP Address	Shows the IP Address of your cutting plotter.		
MAC Address	Shows the MAC Address of your cutting plotter.		
Vacuum	To help improve tracking and cutting accuracy by turning on the fans. If you turn off the vacuum system, the fans will remain inactive during cutting or plotting.		Enable
First Back to Origin	To enable the carriage back to the previous origin; when "Enable" is selected, the carriage will not go back to the previous origin while the selection of "Disable" allows the carriage to do so.	Enable Disable	Enable
AAS Offset	To set or modify AAS offset value. You can refer to "5.3 Printer Test" for more details.		
Paper Saving Mode	To save media by four different modes: 1. Length expanded mode 2. Width expanded mode 3. Both expanded mode 4. Both unexpanded mode		Length expanded mode
Set Communication	To build up the communication between host computer and cutter. *Baud Rate* is to determine the speed of data transmission.		

	Data Bits refers to the size of one block of data. *Parity* is used to check if data was revived correctly or not. 9600, n, 7, 1, p 9600pbs, 7 Bits with NO Parity 9600, o, 7, 1, p 9600pbs, 7 Bits with ODD Parity 9600, e, 7, 1, p 9600pbs, 7 Bits with EVEN Parity 9600, n, 8, 1, p 9600pbs, 8 Bits with NO Parity 9600, o, 8, 1, p 9600pbs, 8 Bits with ODD Parity 9600, e, 8, 1, p 9600pbs, 8 Bits with EVEN Parity 19200, n, 7, 1, p 19200pbs, 7 Bits with NO Parity 19200, o, 7, 1, p 19200pbs, 7 Bits with ODD Parity 19200, e, 7, 1, p 19200pbs, 7 Bits with EVEN Parity 19200, n, 8, 1, p 19200pbs, 8 Bits with NO Parity 19200, o, 8, 1, p 19200pbs, 8 Bits with ODD Parity 19200, e, 8, 1, p 19200pbs, 8 Bits with EVEN Parity		
Firmware Version	To display the version number of Firmware and FPGA code.		
Select Language	To select displayed languages on LCM panel in English, Spanish, Italian, Deutsch, Portuguese, Polish, Turkish or French.		English
Select Units	Provide two-unit systems for users convenient.	cm/s; inch/oz; cm/oz; inch/gram	Metric

Image Scale Length	To adjust the image scale of media length and width that may cause by the thickness of the media.
	
	    The Numerator is the ideal length, and the Denominator is the actual length measured from the resultant.
	
	    For example, cutting a line with 500.0 mm length. The procedure as follows:
			500/500 mm

Image Scale Width	1. Press the [LEFT ARROW] to choose the Numerator and select 500.0 mm, 2. Cut the length by sending a graph file, 3. Measure the length then use the [RIGHT ARROW] key to choose the Denominator, then 4. Press [UP ARROW /DOWN ARROW] to change the values of the actual length.		
Scale Length	Fixed scaling, for maintenance only.		
Scale Width			

Chapter 4   Operation

4.1   Media Loading

4.1.1   Loading the Sheet Media

To load the media properly, please follow the procedures listed below:

Step 1

Use the lever on the upper right side of the cutting plotter to raise or lower down pinch rollers. Pull the lever forward until it makes a clicking sound then the pinch rollers are raised (Figure 4-1).
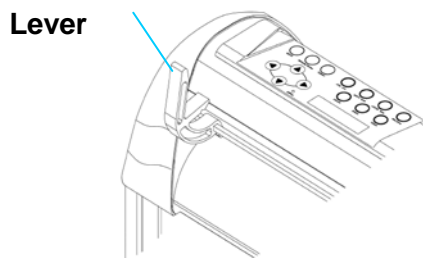
Lever

Figure 4-1

Step 2

Load your media on the platen and slide it under the pinch rollers from either the front side or the backside. The **alignment rulers** on the platen extension will help you to adjust the media precisely.

Note:
Be sure that the media must cover the paper sensors on the platen when loading the media. At least one of the two paper sensors (Figure 4-2) should be covered. Once the media covers the sensor, the cutting plotter will size the media width and length automatically.
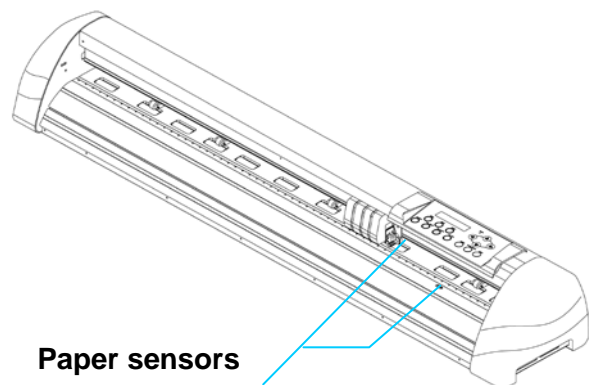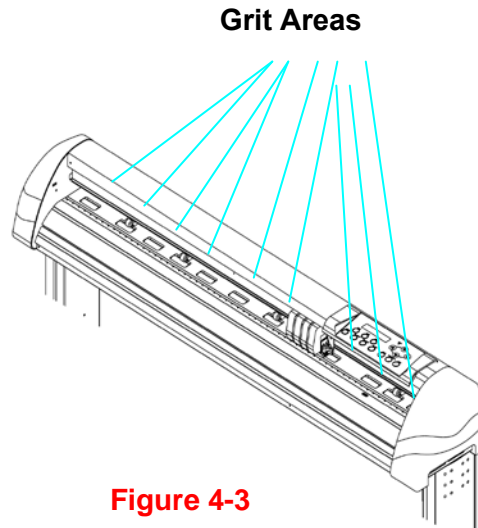
Paper sensors

Figure 4-2

Step 3

Then move the pinch rollers manually to the proper position. Be sure the pinch rollers must be positioned above the grit areas. The **grit areas** on the top trail are labeled Grit Area 1-6. (Figure 4-3).

Grit Areas

Figure 4-3

Step 4

Push the lever backward to lower down the pinch rollers.

Step 5

Turn on the power, the tool carriage will measure the size of the media automatically.   And the plotting cutter begins to work.

> **Note:**
> 1.   Always adjust the position with the pinch roller raised.
> 2.   Move the pinch roller by applying force at the rear portion of the pinch roller support.
> 3.   Do not move it by holding its front rubber roller (Figure 4-4).

(✕)
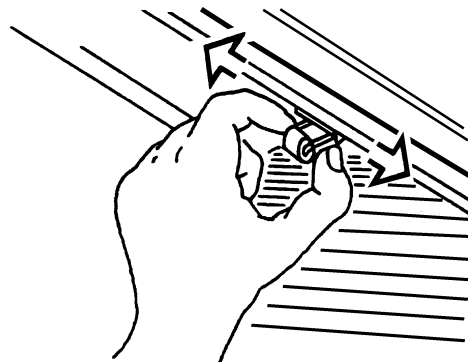
Incorrect

Figure 4-4

> **Note:**
>
> Please pull up the bottom of all pinch rollers (Figure 4-5) before the lever is pushed backwards to ensure accurate media width detection.

Pull up bottom to release grip

ENABLE
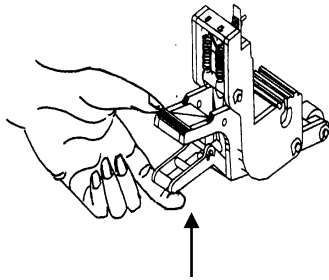
Figure 4-5

4.1.2   Loading the Roll Media

Step 1

Put the roll holder guide bushes on two roll holders (Figure 4-6).

Roll holder guide bushes
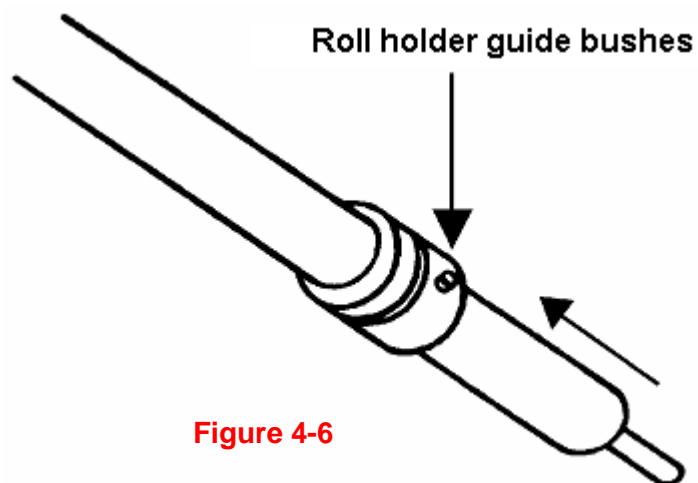
Figure 4-6

Step 2

-- Option A (Use the media flanges) (Recommended)

Insert a roll media flange at the end of each roll media and tighten the thumbscrew until the roll media is firmly gripped (see Figure 4-7).

Then put the roll media on the roll holders. Adjust the position of the roll media ensure that media flanges are able to run in the grooves of roll holder guide bushes (Figure 4-8)
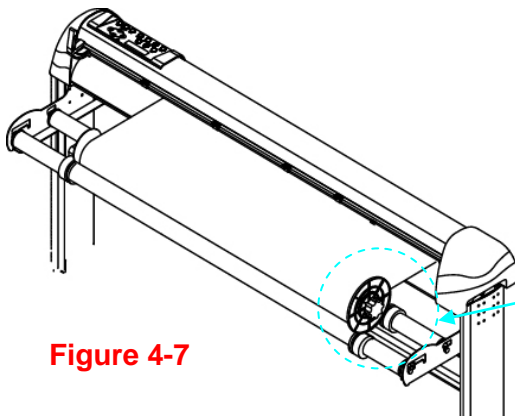
Figure 4-7
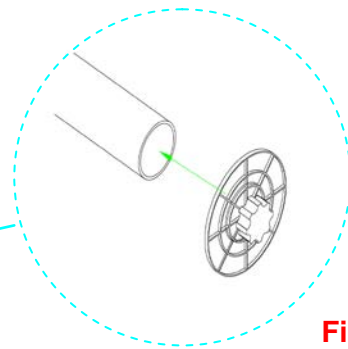
Figure 4-8

-- Option B

Insert the two roll holders into the roll media support set then place the roll media directly between the two roll holders (Figure 4-9).
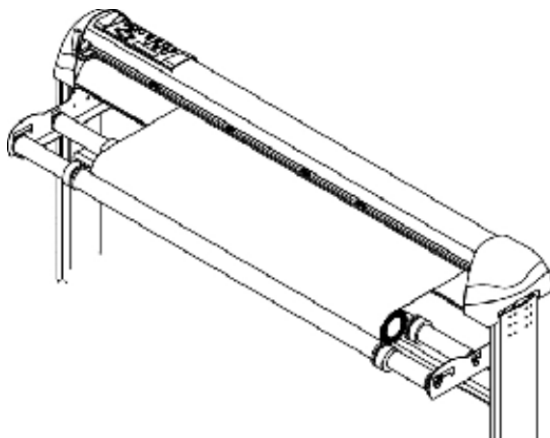
Figure 4-9

Step 3

Load the media on the platen. Please refer to "4.1.1 Loading the sheet media".   After loading the roll media, flatten the media on the platen and hold the front edge of the roll media firmly (Figure 4-10).
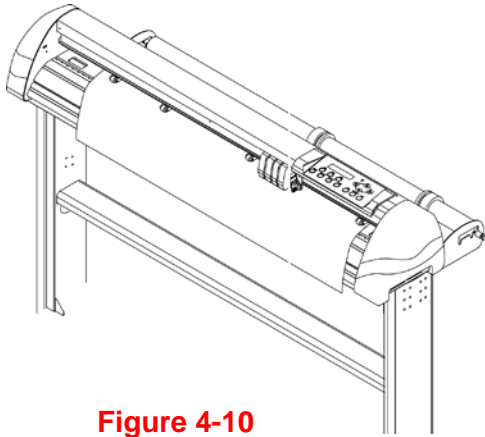
Figure 4-10
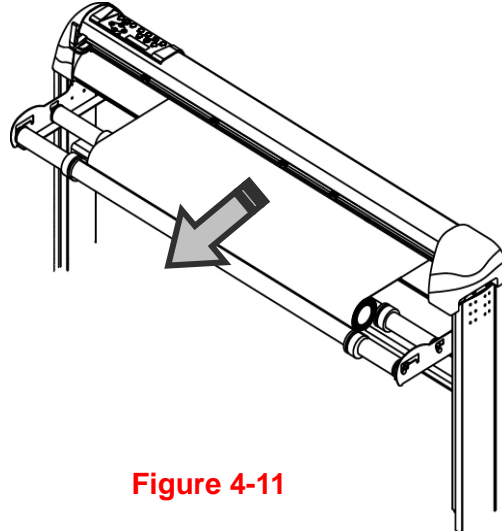
Figure 4-11

Step 4

Turn the roll downward to make an equal tension across the media (Figure 4-11)

Step 5

Move the pinch rollers to the appraise location and note that the pinch rollers must be positioned above the grid drums.

Note:

Make sure that the media tension is equally distributed from left to right. If the media were not tightened enough against the platen, it would cause tracking problems!

Step 6

Push the lever backward to lower down the pinch rollers.

Step 7

Fix roll holder guide bushes on the roll holder to secure the roll media.

Step 8

Turn on the power switch and select Roll, Edge or Single mode appropriate for one time setup, or set to Default Roll in Sizing Setting and Roll type sizing will be performed when the machine is turned on.

Then the cutting plotter is ready to work.

Step 9

Use the reverse steps to remove the media.

4.2   Tracking Performance

In order to achieve the best tracking performance for a long plot, we recommend some significant media loading procedures described as follows:

If the media length is less than 4 meters, leave the margin of 0.5mm—25mm in the left and right edges of the media (Figure 4-12).

0.5mm - 25mm   0.5mm - 25mm

Pinch roller   Pinch roller
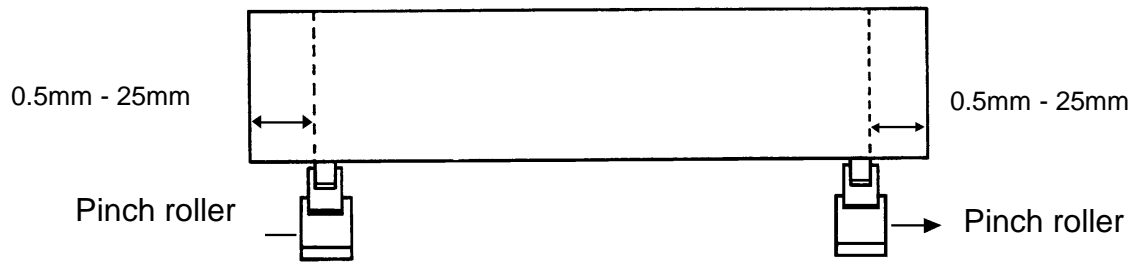
Figure 4-12

If the media length is greater than 4 meters, leave at least 25mm margin on the left and right edges of the media (Figure 4-13).

> or = 25mm   > or = 25mm
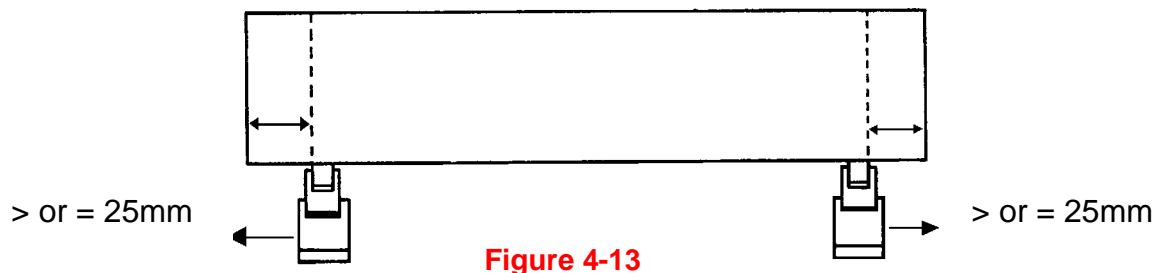
Figure 4-13

Please refer to the paragraph "4.5 How to Make A Long Plot" for more details.

4.3 Cutting Force and Offset Adjustment

Before sending your designs for cutting, you may perform a "cut test" to generate satisfactory cutting results. The "Cut Test" should be repeated until the appropriate cutting conditions for the media are discovered.

After sizing the media, press [CUT TEST] button to select the "square cut", and press [ENTER KEY] to confirm.

The default cutting force and offset value of the cutting test are 80gf and 0.275mm respectively. Press [ARROW KEY] to move the tool carriage to the position where you like. Then, press the [ENTER KEY] to perform Cut Test.

Note: At the same time, the new origin is also set at the cutting test position.

When the cutting test is completed, a pattern appears. Peel off the pattern to see if it can be easily separated from the media base. If yes, the setup tool force is appropriate. If not or cut through the back paper, press [FORCE KEY] to adjust the tool force until an optimum force is obtained (Figure 4-14).
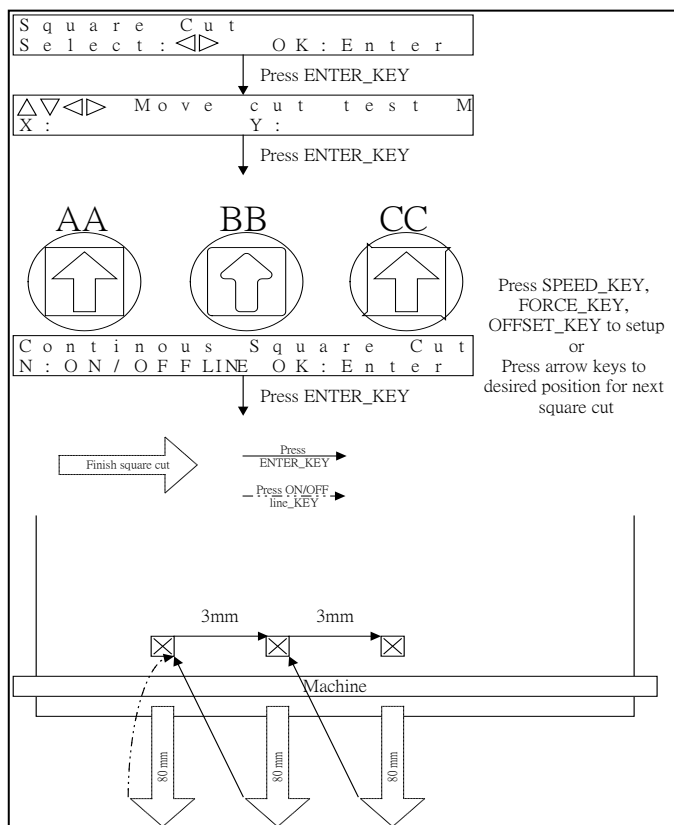
If the pattern appears to be BB or CC layout, press [OFFSET KEY] to adjust the offset value until AA pattern discovered.

Figure 4-14

Then turn the roll downward to make an equal tension across the media
(See Figure 4-16)

Make sure that the media
tension is equally distributed
from left to right. If the media
is not tight enough against the
platen, it will cause tracking
problems.
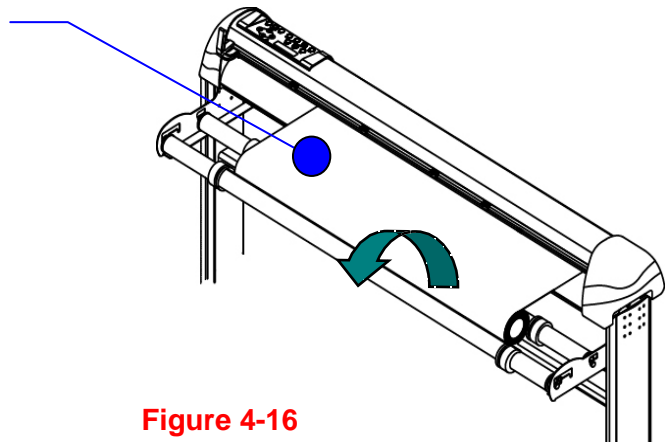
Figure 4-16

4. Engage pinch rollers.
5. Fixes roll media guide bushes on the roll holder to secure the roll media.
6. The protrusion length of the blade should be longer than the thickness of the vinyl.
(Please check the "Blade Specification: About the Tool" in Appendix.) After you
notice all the above, you'll enjoy your gigantic signs production!

4.6 When Completing the Cutting Job

After completing the cutting job, raise the sheet-loading lever, and then remove the material.
You can also cut off the finished job by the Safe Blade (a standard accessory) along the knife
guide. (Figure 4-17)

Figure 4-17

Chapter 5   Basic Maintenance

This chapter explains the basic maintenance (i.e. cleaning the cutting plotter) required for the cutting plotter. Except for the procedures mentioned below, all other maintenance must be performed by a qualified service technician.

5.1   Cleaning the Cutting Plotter

Cleaning the machine properly and regularly will ensure optimal performance out of your machine.

Cleaning Precaution !

- Unplug the cutting plotter before cleaning it in order to prevent electrical shock.

- Never use solvents, abrasive cleaners or strong detergents for cleaning. They may damage the surface of the cutting plotter and the moving parts.

Recommended Methods:

- Gently wipe the cutting plotter surface with a lint-free cloth.   If necessary, with a damp cloth immersed in water or alcohol. Dry and wipe any remaining residue off a soft, lint-free cloth.

- Wipe all dust and dirt from the tool carriage rails.

- Use a vacuum cleaner to empty any accumulated dirt and media residue beneath the pinch roller housing.

- Clean the platen, paper sensors and pinch rollers with a damp cloth immersed in water or alcohol and dry with a soft, lint-free cloth.

- Wipe dust and dirt from the stand.

5.2   Cleaning the Grit Areas

1. Turn off the cutting plotter, and move the tool carriage away from the area needed to be cleaned.

2. Raise the pinch rollers and move them away from the grit area for cleaning.

3. Use a bristle brush (a toothbrush is acceptable) to remove dust from the drum surface. Rotate the drum manually while cleaning. Refer to Figure 6-1.
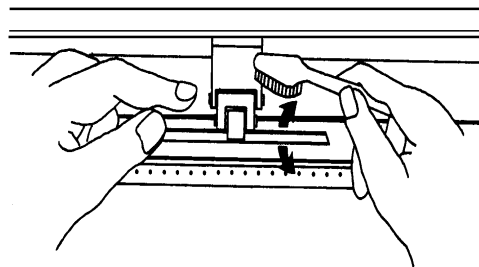
Figure 6-1

5.3   Cleaning the Pinch Rollers

1. If the pinch rollers require a thorough cleaning, use a lint-free cloth or cotton swab to wipe away the accumulated dust from the rubber portion of the pinch rollers. To prevent the pinch rollers from rotating while cleaning, use your finger to hold the pinch rollers to prevent them from rotation

2. To remove the deeply-embedded or persistent dust, use the lint-free cloth or cotton swab moistened with rubbing alcohol.

> **Note:** The daily maintenance of your cutting plotter is very important.
> Be sure to clean up the grit areas and pinch rollers regularly for
> better cutting accuracy and output quality.

Chapter 6   Troubleshooting

This chapter is to help you correct some common problems you may come across. Prior to getting into the details of this chapter, please be sure that your application environment is compatible with the cutting plotter.

> **Note:**
> Before having your cutting plotter serviced, please make certain that the malfunction is in your cutting plotter, not the result of an interface problem or a malfunction in your computer or a software problem.

Why is the cutting plotter not functioning?

Possible Causes:

6.1   Non-Operational Problems

Check the following first:
■   Does the AC power cord plug in properly?
■   Does the AC power cord connected to the power connector properly?
■   Does the power LED still illuminate?

Solutions:

If the LCM is able to display the message, the cutting plotter should be in a normal condition. Switch off the cutting plotter and turn it on again to see if the problem still existing.

If the LCM is not able to display any message, contact the technician from your dealer.

6.2   Operational Problems

Some mechanical problems or failure during operation will cause some problems. The error messages shown on the LCM present the problem first, and followed by recommended actions. If the problem still exists after the recommended actions have been done, have your cutting plotter serviced.

| **Error, Check Media Or Drum or X Motor** | This message indicates that there might be a problem on the **X axis**. Check if the drum is working well and if the media is well loaded. Correct the problem and re-power on to reboot system. |

| **Error, Check Media Or Y Motor** | This message indicates that there might be an obstruction to carriage relating to a problem on the **Y axis**.   Correct the problem and re-power on to reboot system. |

| **Error, Check Carriage** | This message indicates that the blade up/down sensor malfunction. Re-power on to re-boot system. If the problem still exists, check blade extension or contact BREN technical support. |

| **Graph Was Clipped.** | This message indicates that the cutting exceeds the cutting limit. Reload larger media or re-scale the plot to a smaller size; then press the key followed by the display of LCM to continue. |

6.3   Cutting Plotter/Computer Communication Problems

The messages showed below present problems in relation to cutting plotter/computer communication.

```
┌─────────────────────────┐        ┌──────────────────────────┐
│ Communication Error     │        │ Is the connection cable  │
│ Setup: F1- Units  Key   │        │ connected to the cutting │
└─────────────────────────┘        │ plotter and computer     │
                                   │ properly?                │
                                   └──────────────────────────┘
                              Yes                    No
                               │                      │
                               ▼                      ▼
                    ┌──────────────────────┐  ┌──────────────────────┐
                    │ Has the interface    │  │ Refer to Section     │
                    │ setting been done    │  │ 2.7.2 - Connecting   │
                    │ correctly?           │  │ your cutting plotter.│
                    └──────────────────────┘  └──────────────────────┘
                   Yes              No
                    │                │
                    ▼                ▼
```

| Try the communication between your cutting plotter and computer. If it still does not work, have your cutting plotter serviced. | Refer to the "**F1 - UNITS**" key in Chapter 3. |

> **Note:**
> The computer also needs to set up compatible communication parameters to the cutting plotter set up.

┌─────────────────────────┐   If your cutting plotter can not recognize
│ HP-GL/2 Cmd. Error   │   the HP-GL/2 or HP-GL commands, please
└─────────────────────────┘   check the HP-GL/2 or HP-GL commands
                              applied to your cutting plotter are used
                              properly.

6.4 Software Problems

Check the following first:

Does your software package indicate that it will work with your computer and cutting plotter?
Does your software support HP-GL and HP-GL/2 drivers?
(* check the configuration settings of your software.)

Yes | **No**

Does the cutting plotter interface match the requirements of your software?

Most well known cutting softwares in the world have drivers for our cutting plotters. If not, use software that has HP-GL and HP-GL/2 emulation supports and you can chose the following three drivers:
- A3 size: HP7475A
- A1 size: HP7580A
- A0 size: HP Draf Pro Exl or HP Draf Master

Yes | **No**

Does your software recommend using a different cable?

Refer to Section 2.7.2 - Connecting your cutting plotter.

Yes | **No**

Try using the recommended cable.

Does the software vendor provide a sample file?

Yes | **No**

Re-power on the cutting plotter and try to send the file again.

Do something about the error message display on LCM, or consult your software vendor.

7.5   Cutting Quality Problems

Note: The daily maintenance of your cutting plotter is very important. Be sure to clean up the grid drum and pinch rollers regularly for better cutting accuracy and output quality.

Is the blade installed correctly and the blade holder fastened securely?

Yes

No

Is the blade dull or chipped?

Refer to Chapter 2.6 " Blade Installation"

Yes

No

Replace with a new blade

Is tool force set up properly? (The default for tool force is 80 gf)

Yes

No

Is the tool offset set up properly?

Adjust the tool force to obtain an optimum blade force. Refer to Chapter 4.3 "Cutting Force and Offset Adjustment"

Yes

No

Is there any dirt adhered to the blade?

Adjust the tool offset to obtain an optimum value.

Yes

No

Remove the blade and clean it.

Please contact your dealer for technician support.

BREN 700-Series Razor Specifications

Model Number	BREN 724	BREN 740	BREN 752	
Operational Method	Roller-Type			
Max. Cutting Width	610mm (24in)	1016mm (40in)	1320mm (52in)	
Max. Cutting Length	50m (164ft)			
Max. Media Loading Width	770mm (30.3in)	1270mm(50in)	1594mm(62.7in)	
Min. Media Loading Width	50mm (1.97in)			
Number of Pinch Rollers	3	4		
Acceptable Material Thickness	0.8 mm (0.03in)			
Drive Motor	DC Servo Control			
Cutting Force	0~600 g			
Max. Cutting Speed	1530 mm/sec (60 ips) (at 45° direction)			
Acceleration	4.2 G			
Offset	0~1.0 mm (with an increase of 0.025mm)			
Memory Buffer	32 MB / 16 MB (when using AAS)			
Interfaces	USB 2.0 (Full Speed), Serial (RS-232C) and Ethernet			
Type of Command	HP-GL, HP-GL/2			
Mechanical Resolution	0.006 mm			
Software Resolution	0.025 mm			
Distance Accuracy	±0.254 mm or ±0.1% of move, whichever is greater			
Repeatability	±0.1mm			
Curve & Arc Smoothing	Yes			
Configurable Origin	Yes			
Test Cut Capability	Yes			
Tangential- emulation	Yes			
Repeat	Yes			
Copy	Yes			
Pouncing	Optional			
Control Panel	LCD (20 digits x 2 lines), 14 Keys, 1 Power LED			
Diameter of Blade	2.5 mm			
Power Supply	AC 100-240V, 50~60 Hz (auto switching)			
Power Consumption	Max. 110watts			
Dimension (HxWxD) mm	412 * 950 * 486	1096 * 1450 * 651	1111 * 1774 * 651	
(HxWxD) in	16.2 * 37.4 * 19.1	43.1 * 57 * 25.6	43.7 * 69.8 * 25.6	
Net Weight	18 kg	41.5 kg	50 kg	
Stand	Optional	Standard		
Operation Environment	Temperature	15°C~30°C / 60°F~86°F		
	Humidity	25% ~ 75%		

<div align="center">**WARRANTY**</div>

1.STANDARD WARRANTY

All BREN products carry a standard three (3) year Warranty that covers Manufacturing defects in material, circuitry and/or workmanship. The warranty begins upon date of purchase and requires that the products covered be purchased direct from and registered with BREN Inc.

Some products purchased direct from BREN are automatically registered and recorded upon shipment. Warranty includes all parts, labor and supplies necessary to repair or replace (at BREN's option) any materials, circuitry and/or parts which prove to be defective under normal use and application. Product must be returned to BREN in original or equal packing at shipper's expense. No freight collect shipments are allowed. Customer should contact BREN Service department between 8:00 a.m. and 4:00 p.m. Monday thru Friday Central Standard Time at 1-800-826-3991 for Return Authorization Number. Shipments received without prior authorization will be refused.

This warranty does not cover shipping, damage or defects caused from abuse, misuse or mishandling. In addition, this warranty is void if the product has been opened or serviced in any way by other than BREN service technicians or a BREN Authorized Service Location. No other warranty, either expressed or implied, is valid.

2.PRODUCT INSURANCE PROGRAM (PIP)

The Product Insurance Program or 'PIP' is an optional program that supplements the standard warranty for the first year of ownership. Designed for the customer that requires the maximum amount of protection and the minimum amount of downtime. The PIP assures the user a same or equal replacement of a BREN product within two (2) business days of notification to BREN Customer Service Department, at any time during the first year of ownership. Failed product must be packed in the product box or original box and returned to BREN. BREN will pay all shipping costs for both replacement to user and failed product from user. Return shipping labels and documents will be provided by BREN with replacement.

The Product Insurance Program can only be purchased within the first thirty (30) days from the time of original product shipment from BREN to the user and becomes effective when payment is received by BREN. Prices are as follows:

Product or Model:	Per Year
BREN Razor 724	$400.00
BREN Razor 740	$500.00
BREN Razor 752	$600.00