VINYLEXPRESS®
R Series™

USER GUIDE

For Vinyl Express R Series Cutters

SIGNWarehouse.com®

Thank you for choosing an R Series cutter from SignWarehouse, Inc.

Before using your cutter, we suggest you read this guide. It will guide you through the setup and proper use of the cutter. If you experience problems using the cutter, turn off the power and refer to this User Guide. If you cannot find the solution to your problem, send an email to rsupport@signwarehouse.com.

SIGNWarehouse.com

2614 Texoma Drive
Denison, TX 75020

Online Support: http://rsupport.signwarehouse.com
Free Email Support: rsupport@signwarehouse.com
Phone Support: 800-966-1783 (Based on a Per Incident Fee for Vinyl Cutters)

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Note that changes to the cutter or its operation may occur without notice.

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Notice

(1) R SERIES cutters require a power supply that is 90V-230V. If your power supply does not conform to this requirement, do not operate the cutter. SignWarehouse assumes no liability for damages resulting from the use of an improper power source.

(2) Do not touch any moving parts while the cutter is operating.

(3) If the cutter is damaged or not functioning properly, we will repair or replace subject to the terms of the Vinyl Express R Series warranty. DO NOT attempt to repair the cutter yourself, as doing so will void the warranty.

(4) Keep the cutter free from dust and debris that may impede or damage it

(5) Do not disconnect any the power cable when the cutter is powered on.

(6) R SERIES cutters must be connected to a grounded, three-prong, power outlet.

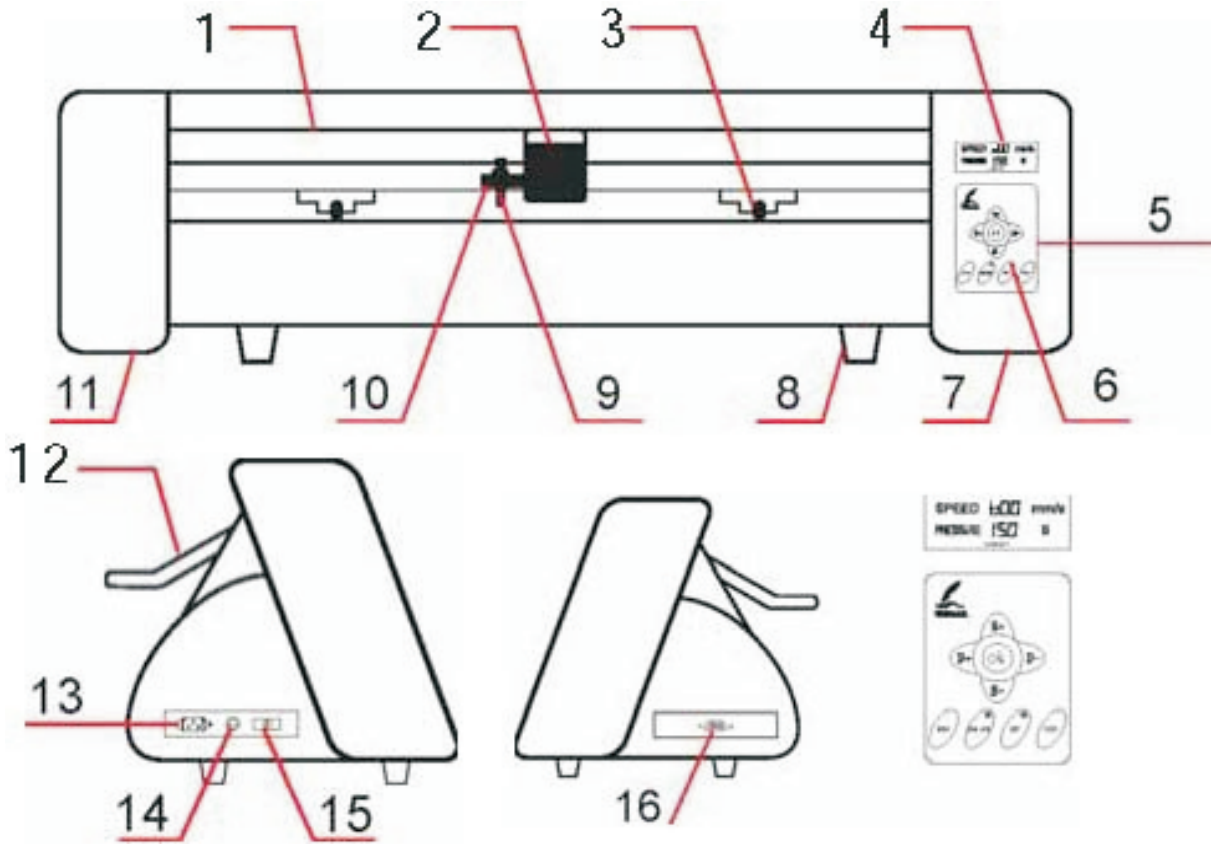
(7) Disconnect the power if the cutter is idle for extended periods of time.

Vinyl Express R Series
Standard Accessories

Inspect the contents of the R Series cutter box before using or assembling your cutter. The package should include the following items and quantities:

Description	Quantity
Vinyl Cutter main body	1
Vinyl Cutter stand assembly with media supply rollers	1
Power cable	1
RS232 Serial cable	1
USB cable	1
Fuse	1
Ballpoint pen	1
Ballpoint pen holder	1
Blades	3
Blade holder	1
Platen ruler with peel-and-stick backing	1
Vinyl Cutter dust cover	1

Vinyl Cutter Main Body Description



1. Cutter protection strip
2. Cutting head / tool carriage
3. Pinch roller
4. LCD display
5. Control panel
6. LED power-on lamp
7. Right end-cover
8. Cutter foot
9. Tool holder
10. Tool holder tighten- screw
11. Left end-cover
12. Pinch roller lever
13. AC power port
14. Fuse
15. Power on/off switch
16. RS232 and USB ports

Installing Your Cutter

(1) Unpack and assemble:

Assemble the stand and place the main cutter body onto the stand by inserting the four feet on the cutter body into the holes on the top of the stand. (If you wish to run the cutter as a table-top model, simple place it on a surface large enough so that all four feet are securely on level footing.)

Note: the cutter should be located in a clean, low-dust environment. Avoid placing the cutter near other equipment, such as saws or routers that might expose it to excessive dust and debris.

(2) Power on and examine:

Connect the power cable to a properly grounded AC110V outlet. Switch on the power; the green LED on control panel will light when the power is on. Next, insure that the cutting head moves freely from right to left and back by manually sliding it back and forth. The manual movement initializes the cutter and the default settings appear on the LCD screen, as follows:

Speed: 600 mm/s	(Approx. 24 inches per second.)
Pressure: 100 g	(Most vinyl films cut well at between 100 and 150 grams of pressure.)

(3) Connect to computer

Power on your computer. Leave your cutter powered off and disconnected from your computer.

Insert the Vinyl Express R Series Setup disc into your CD-ROM drive. The setup program will launch automatically and guide you through the process step-by-step.

Install the USB device driver for your R Series cutter. **Do this before attaching the USB cable.**

Note: If you attach the USB cable prior to installing the R Series USB driver, Windows will auto-install a generic USB driver that will not work.

You may skip this step if you are connecting via Serial to either Com 1 or Com 2. See Com settings below.

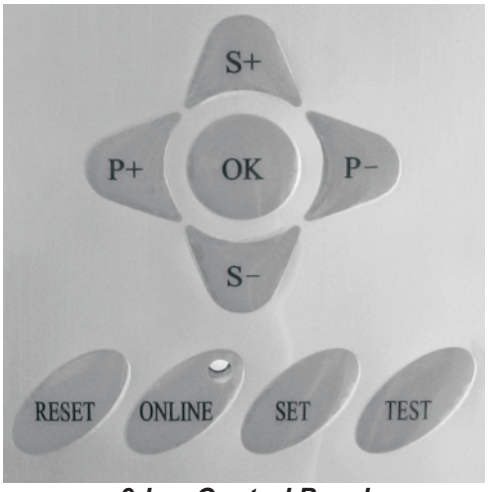
(4) Com1 / Com2 Settings. Use only for Serial connections

Baud rate: *9600*
Parity*: None*
Data bit: *8*
Stop bit: *1*
Data flow control: *RTS/CTS; XON/XOFF*

Control Panel Operation Detail

When you turn on your cutter, after a moment, the cutting head the carriage will move to right side. (The point-of-origin, from where cutting will begin.) The lighted green LED on the **ONLINE** button indicates your cutter is powered-up and online. (Ready to operate.) When the red LED on the **ONLINE** button is lighted your cutter is powered-up and offline. (Not ready to cut, or receive cut data from your computer.)

The LCD display shows the current speed and pressure at which the cutter will operate. The keypad has 4 directional buttons that can also function to increase/decrease pressure and speed. At the center is an OK button. Below that are four additional buttons that control menu functions.



9-key Control Panel

LCD Display Panel

Menu Keys

How each key functions:

S+ / S-	Increase / Decrease Speed Forward / Back	**P+ / P-**	Increase / Decrease Speed Left / Right
OK	Accept changes	**RESET**	Cancels current job and resets the cutter
ONLINE	Online / Offline	**SET**	Sets a new point-of-origin
TEST	Performs a small test-cut. (In Offline mode)		

Common Menu Functions

Why and how to access frequently-used features:

Creating a New Starting Point

When the cutter is powered-on and initialized, the blade travels to the furthest point to the right of your cuttable media width and automatically sets that as the point-of-origin. However, and especially when cutting scraps, you may want to change the point-of-origin so that cutting begins on an unused portion of your material. Here's how to do it:

ONLINE to take the cutter offline, which is indicated by a red light.
S+ / S- / P+ / P- to steer your media forward and back; and the cutting head left and right.
OK to set the point-of-origin once you've steered to your desired start-point.

Doing a Test Cut

Different materials vary in thickness. So to do a trail-cut that uses very little of your media, a test cut prior to sending your job is a good idea. It's also quick and easy to do. Here's how:

ONLINE to take the cutter offline, which is indicated by a red light.
TEST to perform a small trial-cut from a file that's built into the cutter.

Installing Blade and Pen

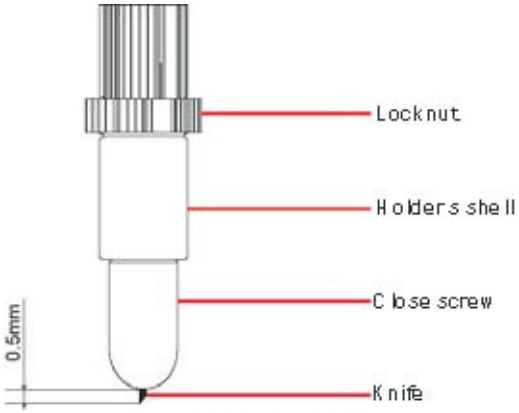
R Series cutters employ what is known as a “drag-knife” cutting method. Drag-knife cutting uses a blade that swivels freely. So as it moves over the vinyl the cutting edge can follow the contours of the shapes being cut. It’s the fastest and most efficient method for cutting vinyl.

To install a blade into the blade holder, remove the Close Screw by twisting it counterclockwise. Set the blade into the bottom of holder, and then reattach the Close Screw. The amount of blade extending beyond the end of the Close Screw should ideally be no more than 0.5mm. (0.02”)

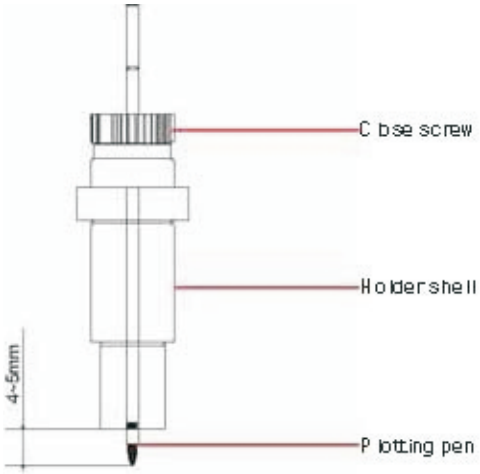
Your R Series cutter can also be used as a pen-plotter. (Plotting on paper.) The Close Screw on the pen holder is at the top. Remove it by twisting counterclockwise, and then insert the pen with the amount of pen extending beyond the end of the penholder between 4 and 5 mm. (Approximately 0.15”). Then simply reattach the Close Screw.

Installing the knife or pen holder into the cutter:
Turn off the power. Loosen the thumbscrew on the round sleeve at the front-left of the cutting head. Then slide the holder into the sleeve until it stops. Lightly tighten the thumbscrew, and you’re ready to power-up the cutter, insert media and start cutting or plotting. Note that when cutting vinyl, it’s highly recommended that you first perform a test cut to insure that you have enough blade extension, as well as the right amount of cutting force.”
(See Common Menu Functions on the previous page.)

Blade Holder/ Blade



Pen Holder / Pen



Loading Media

Load media / Load paper:

You must lift the tension levers on all three pinch rollers before inserting or removing vinyl or paper media. Lifting the levers moves the pinch rollers off of the cutters drive drum (or media if media is installed in the cutter). When your media is loaded, simply lower the tension levers.

With media loaded you can press "UP" (S+), "DOWN" (S-), LEFT (P-) or RIGHT (P+) to steer the media before plotting. It's advisable to hold the S- key down continuously to assure your material is tracking straightly for the entire distance you wish to cut. Then roll it back using the S+ key.

Adjust your speed and pressure, do a test-cut and your ready to send your job.

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