

# Static Dissipation in CR Series Cutters

# 1-1

- ◆ Static dissipation from vinyl can result in several failure modes in vinyl cutters
- ◆ Static from vinyl gets worse when the humidity level gets low.
- ◆ Locations such as Phoenix, Arizona or Las Vegas, Nevada are worse case as the humidity can be in the single digits during the summer months.

# 1-2

Vinyl Cutter failure modes caused by static discharge include the following:

- ◆ Stopping during cutting
- ◆ Losing connection between the cutter and the computer
- ◆ Cutting lines where there is no artwork
- ◆ Missing cuts where there is artwork
- ◆ Uncontrolled motor movement / spilling vinyl onto the floor
- ◆ Carriage moving to the outer limits of the cutter range when artwork is within the range of the cutter

# 1-3

How to determine if you have a static related issue?

- ◆ Static related issues usually occur when you are cutting long jobs that run a lot of vinyl material over the vinyl cutter
- ◆ Remove the blade holder from the carriage
- ◆ Use a long job with large artwork with long line cuts that uses a long length of vinyl. Perhaps cut 2 images that are 22" x 48". The job should take 10 minutes or so to run.
- ◆ Run this job without vinyl in the cutter and run it with vinyl in the cutter. Run both tests without a blade so no vinyl is wasted during this test.
- ◆ If your cutter stops during cutting with the vinyl in the cutter but completes the job without the vinyl in the cutter it is highly likely that static generated by the vinyl is interfering with your cutter function.
- ◆ You can tell if the job is complete by the motor motions the cutter makes when it finishes with the large rectangle weeding frame.
- ◆ Failure modes due to static discharge can also occur without actually running a cut job by simply using the arrow keys in offline mode to roll the vinyl over the rollers front to back at high speed for 10 to 20 cycles.

# 1-4

How to determine if you have a static related issue?

- ◆ For a CR730/1300 the port connection may disappear from device manager and a message will pop up stating that there is an unknown device. Pressing the reset button on the cutter will reestablish the connection with the computer. The job may complete if all the information was sent to the cutter prior to interruption with the communication.
- ◆ For the CR630/1200 the cutter may stop during cutting. For the CR630/1200 there are other possible reasons for stopping during a cut which include device settings. In Device Manager, Flexi, SignCut and on the cutter, the settings are 9600 / 8 data bits / None / 1 stop bit / Hardware flow control, RTS and CTS should be selected and no others. In Flexi, choose CR630G or CT630G or CS630G for the CR630 and CR1200G or CT1200G or CS1200G for the CR1200. Contact Cutterpros for additional settings information if needed.

# 1-5



- ◆ For CR series cutters, note that the resistance from the aluminum base plates to the ground plug is very high. The reason for this is due to a non-conductive clear-coat on the aluminum.



# 1-6

- ◆ A light grit sand paper or emery board is used to remove the coating from the tips of the aluminum peaks where the vinyl rubs and comes into contact with the plate. Do this on both the front and back aluminum plates.

# 1-7

- ◆ With the tips of the aluminum lightly sanded we can achieve a resistance to ground of only .2 ohms which is adequate to dissipate the vinyl static safely to ground.



# 1-8

- ◆ Other solutions to vinyl static include:
  - ◆ Slow down your cutting speed to 20 or 30 to reduce the amount of static generated and give the vinyl time to discharge static
  - ◆ Anti Static Spray
  - ◆ Anti Static String or rod on the vinyl
  - ◆ Make sure your cutter is grounded to the stand with a ground wire
  - ◆ Make sure the 3<sup>rd</sup> prong of the three prong plug is not bypassed with a converter
  - ◆ Plug the cutter directly into the wall outlet
  - ◆ Add humidity to the environment with a humidifier.
  - ◆ Use an ionizer blower

# The End

Please review our tutorials for more information on particular features.

<http://www.cutterpros.com/downloads> for further information.

To speak with a technician, submit a ticket at

<http://www.cutterpros.com/support/> or call 888-828-8776 x227

CutterPros.com/Hahn Ventures LLC is NOT liable for any software/attachments/instructions/download links/content contained in this presentation. Use the contents of this presentation AT YOUR OWN RISK. CutterPros.com/Hahn Ventures LLC is NOT responsible for any damages incurred to your computer hardware/software or any possible viruses/Trojans/malware or any other type of damaging programs that may be contained in the links and/or attachments. It is your responsibility to verify the contents before using any of the information contained in this presentation. By using the contents in this email you agree to hold CutterPros.com/Hahn Ventures LLC harmless of all liability and damages. You agree that you are totally responsible for what you put on your computer, software you install on your computer and files you download to your computer.