

# sublimation quick stop

WITH MATT WOODHOUSE & KEVIN LUMBERG



## Troubleshooting Your Sublimation System

**W**hen you are working with any type of equipment, things can go wrong. That is why having technical support available when you purchase any equipment is so critically important. But even with top-notch technical support, you should be able to do some basic troubleshooting on your own. This will save you time in the long run, and also will make you more confident about how your equipment works.

### START WITH THE BASICS

The first thing in troubleshooting any problem is to try to systematically isolate that problem, so that you can determine what the cause is. Then with the problem identified, you can correct it. It is helpful to start by making a list of all the possible causes of the problem. The computer, graphics-program settings, printer-driver settings, or even the graphic itself could be the culprit.

The heat press, paper, product, or even the environment can be the issue. Looking at the long list of possibilities, it could be easy to get frustrated, but it is not as bad as it appears. Taking things one step at a time and starting with the basics are the ways to solve the problem and save some sanity. Go through your list, isolate each one, and check them off your list as you go.

### ENSURE YOUR PRINTER IS FUNCTIONING PROPERLY

The first thing to check is to make sure your printer prints a good nozzle check. By printing the nozzle check pattern, you are isolating your printer to make sure it is functioning properly. The printer will print a special test pattern, which can be compared to an example on your computer screen.

Gaps in the printed pattern will indicate a clog in the print head. This test is something you should get in the habit of doing before printing the first transfer each day. It is also not a bad idea to run one on your printer daily, if possible, even if you are not using your printer. It will help to keep your printer running in tip-top condition.

Sublimation printers mix either 4, 6, or 8 colors of ink to create a virtual rainbow

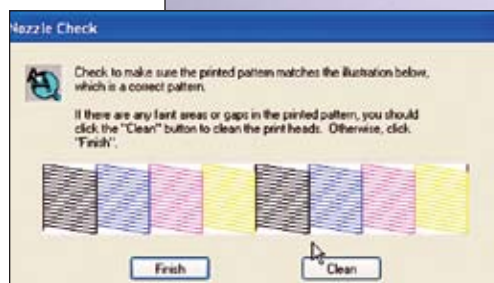


Primary chart pressed on Unisub white aluminum and attached to printer.

Printed nozzle check and primary chart.



Nozzle check pattern.



**Digital time and temperature heat press.**



of colors. For instance, if you are printing the color green, the printer will mix yellow and blue. If your printer is missing the yellow nozzles, the color you will end up with will be blue. Most times, running a nozzle cleaning cycle will get all your print heads working correctly, and correct your problem. The cleaning cycle operation is found in your Epson printer driver or the PowerDriver, in the "Utility" or "Maintenance" sections.

If you are using SubliJet ink, by using your PowerDriver software, you can also print a "Primary Chart". This is in the utility area where you do nozzle checks and cleanings. The "primary chart" is a small, one-inch printed square of each of the primary colors of the printer you are using. With the primary chart printed, you will be able to see if the printer is able to print a solid block of color, and it is a bit easier to make sure each of your colors are printing correctly. It is also helpful to print and press this primary chart when you know your printer is functioning correctly. Keep this sublimated image to compare to when you are troubleshooting.

If you have run several cleaning cycles and your nozzle check does not improve, you should contact your distributor for advice on how to continue. There are many advanced techniques you can use to clear up a bad nozzle check if the head-cleaning process does not work. The correct technique to use depends on the sublimation printer setup that you are operating, and whether or not you have a bulk ink system.

As you talk to your technical-support

representative, you should take good notes. Keep a notebook, folder or binder to save your notes. The information and procedures may be helpful for future use.

### **CHECK YOUR HEAT PRESS AND MATERIALS**

If printer issues do not seem to be the problem, some easy things to quickly check are the following:

Did you press the item for the correct time? Too little time will result in lighter, splotchy-looking colors, and too much time will result in blurred images.

Is your heat press running at the correct temperature? It is good to periodically check your heat presses. You can use a laser thermometer to easily check your press platen if it is black Teflon coated. They will not work on the silver uncoated platens. Check with your supplier or press manufacturer for their recommendations.

Did you print on the correct side of the paper? It sounds silly, but it happens to all of us. If you print on the wrong side of the paper, your sublimated image will look light and splotchy.

Check the dates on your ink. Are they old? Old inks can result in a color shift that can lighten the colors in your sublimated items.

It could be possible that there is an issue with the item you are trying to sublimate. First, you should make sure that the blank item you are trying to sublimate is suited for sublimation. All items that are sublimatable are made of, or coated with, a special polyester/polymer that will not melt at the

temperature that sublimation occurs. You should also be aware that the quality of the product you are sublimating can affect the quality of your sublimated image.

You can determine if the issue you are having is with the actual item you are pressing, by sublimating the same image onto another substrate. It is good to have a small amount of 100% plain white polyester fabric on hand for this purpose. You can purchase the fabric at any local fabric store. Just be sure it is 100% polyester. It is also a good idea to purchase a Unisub Test Kit that contains several test strips of Unisub product from your sublimation distributor. They are inexpensive, and are good for not only trouble shooting, but are useful as color matching test pieces.

### **YOUR SOFTWARE/ARTWORK MUST BE CORRECT**

Your computer has several pieces of software for sublimation. From the artwork itself, to settings in your graphics program, there are several things to check to ensure color accuracy. Start by making sure that they are working correctly and set up correctly for optimal sublimation results.

First, check your graphics-program color-correction settings. If you are using Sublijet inks, make sure your color correction is turned off (you should have documentation with your PowerDriver package). For ArTainium inks, follow the directions for your initial set up to make sure that they are all still correct. I know a person that likes to kid around that there are gremlins in her computer that play with the settings. They can and do change, and if any setting is incorrect, it can affect your output.

Second, go back to a file that worked recently, and print and press it. If it looks good again, you probably isolated the problem to today's file. It could be a CMYK color format instead of the correct RGB format. CMYK colors will shift dramatically when you print them with your sublimation system. Always work in RGB colors. Where did you get the image? Is it a scanned image, digital camera, emailed? You can isolate each of these by recreating them. Try printing the image in a different graphics program. If it works with another graphics program, you have isolated it to the graphics program.

### **HAS SOMETHING CHANGED?**

The one constant in life is change, and this is also true with sublimation. When one of your variables changes, it could

change your output. If your sublimated products looked good yesterday, and not today, did anything change during that time? Did you install any new software, software updates, service packs, new ink (is a bag of ink on the wrong bulk system line), new sublimation paper, new substrates, or new equipment?

If you did change one of these items, there is a good chance that you have identified the problem, as any of these changes could theoretically change your sublimation results. You can roll back some of your software settings with the restore function on your computer. Further, you can reinstall any software that may be installed incorrectly.

If you installed a new printer driver, you should uninstall the driver, and then reinstall it. There may have been a software issue on your initial install, which can be corrected by a reinstall. Have any settings been changed on your graphics program? You can uninstall your graphics program, and then reinstall it, which will put your graphics program back at the default settings. If you have to take this step, you will then have to set up the color-correction settings per the instructions for your particular brand of ink.

## ENVIRONMENT CAN AFFECT YOUR OUTPUT

Your environment is constantly changing, and being aware of how it can affect your sublimation equipment can be a huge benefit. By knowing the effects, you can work to control them. Humidity can have both good and bad effects on your system. Having a higher humidity level will help keep your printer running better, and you will have fewer problems with clogged nozzles.

Matt recently moved and when he set up his sublimation printer, he happened to set up a 50-gallon fish tank in the same room with the printer. Before that time, he did not have a humidifier, and had been having some clogging problems with the printer. After the move, he noticed that the printer performed flawlessly, just from the humidity that the fish tank added to the room. It is good to have a humidifier to maintain a constant humidity, and it is increasingly important in dryer parts of the country, or at times of the year where heaters or air conditioners are used. We have found a 50% relative humidity works well.

Humidity is good for the printers, but not so good for the papers and substrates. You should never leave your sublimation paper in the paper tray of your printer. The



Laser thermometer.

paper can absorb humidity in the air, which can cause uneven transfers and bleeding of your sublimated image when your item is pressed.

If humidity has affected your paper, you can quickly and easily dry your transfer by "force drying" it. Place your printed transfer on the bottom of your press, and move your heat platen over the paper without closing it on the paper. The heat radiating from the press should dry the paper in a few seconds. You should also pre-press all shirts for a few seconds before placing the transfer on the shirt. This will remove moisture from the fabric.

## YOU DON'T HAVE TO BE MR. GOODWRENCH TO KNOW YOU'RE OUT OF GAS

Troubleshooting your sublimation system is not as daunting as it first appears. Most times, the answer is right in front of you. You just need to step back, take a deep breath, and look to isolate the problem. In that regard, it can be a lot like your automobile. A car is a complex piece of machinery, with millions of pieces and components.

If it suddenly quits working, there are some quick and sometimes obvious things you check. Are you out of gas; is the battery dead; is there oil? If after doing basic troubleshooting on your car, it still does not work, you contact someone to help you. Many times, you just need someone with experience to point you in the right direction.

## QUESTION FROM A READER

This question is from Wayne C., in Florida:

*In your article in the June 2007 issue of A&E, you talked about a web site(s) you could*

*go to, to access royalty-free images and art. ... I don't recall seeing them at the end of the article.*

You can find many, many websites on the internet that have royalty-free images if you do a quick Google search. Media-bakery.com, fotolia.com, dreamstime.com, and liquidlibrary.com, to name a few.

Further, Unisub has launched a site, Unisubgraphics.com, that has hundreds of designs specifically for sublimation products. The most important thing is to review the licensing agreement, and the terms of use for the images and art. It is always suggested that you contact your attorney, if you have any questions, to be sure you are legally using the images.

## OUR NEXT QUICK STOP

Whether we are out at a trade show or in the office, this is one of the most-common topics that emerges: How much do I charge for a product, and how do I let potential customers know about it? In our next Quick Stop, we will discuss the tools that are available to make you successful with your pricing, sales and marketing.

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