

4 Advantages of Digitally Printing Graphic Overlays!

The cornerstone of the membrane switch and graphic overlay world has always been screen printing. Screen printing has allowed companies like SSI Electronics to accurately and affordably print vibrant, sharp images and circuitry for a wide array of unique products for our customers. While the screen printing manufacturing process is still viable, desired, and highly effective, SSI has supplemented our printing capabilities with digital printing processes. Here are four of the main advantages of digital printing graphic overlays:

- 1. *Halftones.*** In simplified terms, a halftone is a fade from one color to another. In the screen printing world this is done by printing a series of very small lines (or dots) which we measure in lines per inch, or LPI. This means that if you looked closely at a screen printed product with a halftone you would see a series of small dots that make up this color gradient. Digital printing presses have changed the game in regards to printing these halftones. Compared to screen printing which is typically 80-100 LPI, digital presses can print upwards of 2,000 LPI. Yes, these dots (or lines) are over 30 times smaller than the screen printed process! The result: A much smoother, less pixilated look compared to typical screen printing.
- 2. *4-Color Process.*** Digital printers are able print what is known as a 4-color process, or CMYK, which stands for the colors cyan, magenta, yellow, and black. Most colors can be closely reproduced by using sophisticated software combined with those colors, so photos and images can be reproduced far more effectively than with typical screen printing processes. This is a huge advantage for companies looking to produce life-like images or photo representations on their products.
- 3. *Consecutive Numbering.*** One practice that some OEM's are now requiring more and more often, is the serialization of overlays or keypads. In a typical screen printing scenario, this is impractical to do in large volumes as each part would require its own unique screen to account for the change in numbers. This is both cost and time prohibitive. Printing digitally allows for this change to occur, and because there are no screens whatsoever, it really doesn't add any additional cost for the customer.
- 4. *Fine Printing.*** As discussed in the halftones section of this paper, one of the biggest differences between screen printing and digital printing is in LPI, and again, this measures how many printed lines can fit into an inch. Some unique projects require very small or very fine text to be printed, and the fact that the printed dots from a digital press are over 30 times smaller than traditional printing methods, the result of this is a much finer text which is much more clear and legible for the end user.